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Live Stock in the Canadian Northwest.

By Thomas Shaw, Professor of Animal Husbandry, Minnesota State Agricultural College, St. Anthony Park, Minn.

That the Northwest will continue to grow good stock cannot for a moment be doubted. The extent to which it will do this will be vastly greater some future time than it is at present. But the quickness in the increase of live stock production in arable areas may be somewhat disappointing, owing to the marked adaptation of the country for producing grain. The human race are naturally like the ox, lovers of ease, hence, as long as they can make wealth by sowing and reaping and selling grain in the summer season and resting in the winter, they are not going to give that attention to the keeping of live stock which they would, if they felt the necessity of doing the same as a means of revenue. It is not until the soil begins to show signs of somewhat serious deterioration that the farmers will to any great extent look to live stock as a means of renovating their lands. This, at least, has been the experience of all the States, which, one after another, have been opened up in the west. How many years must elapse before these indications show themselves will depend upon the fertility of the land. It is, however, to be regretted exceedingly that farmers will not engage in the maintenance of fertility until it is in a great measure gone. It is so much easier to maintain fertility than to restore it. The difference between these is no greater than the difference between the maintenance of health and the restoration of the same.

It will be different in what may be termed semi-range areas. There the keeping of live stock will more and more extend. The limit of extension in this direction will be, first, the limit of the areas adapted to stock keeping that are yet unoccupied, and second, the limit of the production, with a view to provide food in winter. That this question must soon engage the attention of the ranchmen cannot be doubted. It has engaged their attention to a considerable extent in certain areas, but more and more will it engage their attention as time goes on.

Some day the ranch country will be divided into smaller holdings. This will mean capacity to grow more and better stock, since the animals can be given closer attention, more supplementary food can be grown for them, and more of the labor will be done by interested parties. The great question which the smaller ranchmen have to solve is the growing of food for winter. Of the introductions for this purpose since settlement began, nothing is more promising than the grass, bromus inermis. Heretofore attention has been given chiefly to growing it for hay, but to the small ranchman and the farmer the pasture properties of this grass are likely to be as valuable as the hay producing properties, as is being shown in the experiments that are being conducted by Mr. Bedford at the Brandon Experimental Farm.

That much of the natural grazing in the Northwest is not utilized is very evident from what may be seen along the various lines of railroads, and particularly along the main line of the C. P. R. Take the country, for instance,

from Regina to Calgary. In this stretch are millions of acres ungrazed. Will it always be so with these acres? Assuredly no, and I take it for granted that so it is in vast stretches back from the railroads. The room for extension, therefore, in the line of cattle production in the Northwest is very great.

How are these cattle to be made ready for market? True, they can be shipped in fair shape from the grass, and they have been so shipped during recent years. But the fact remains that cattle fed grain during the finishing period will make a better quality of meat than those not so fed. Why then may not the farmers whose lands are showing diminished fertility engage in the work of fattening those ranch cattle, will it not pay them? This work can be done without any outlay for fencing.

The Government and the railroads are well engaged when they try to make easy for the farmers the transportation of pedigreed stock. This has,

Shaw. Our readers will remember he judged the beef cattle at Winnipeg and was especially pleased with the Short-horn cattle. After this he judged at several of the leading shows in the Territories, and went as far west as Calgary, as well as visiting the Experimental Farms. This is his second visit to this country. For this reason and because he has travelled extensively in all parts of Canada and the United States and is a keen observer, what he has to say about our live stock interests comes with all the greater force.

The Hog Business in Alberta.

There is every prospect of a large increase in the raising of hogs in Alberta. Up to the past two or three years the amount of pork raised in this part of the Territories has been very small, and the supply at almost every point was not equal to the local demand.

ments depending only upon market conditions which the future may hold in store.

The remarkable thing about the situation at present is that while Edmonton and Strathcona, at the extreme end of the line, are at present exporting hogs and bacon in a large way, a number of points which are closer to the market, and where quite as great, or even greater, natural inducements to hog-raising exist, are importing more pork during the year than they send out. And here some of the anomalies of market supply and demand show themselves. At Edmonton and Strathcona some years ago the Gallagher-Hull Co. commenced in the pork packing business, and finding a ready demand for their hog products, they were able to assure the farmers of a steady and certain market for whatever hogs might be raised. The result has been that farmers of that district have of late years been going into pork-raising on



PROF. SHAW JUDGING SHORTHORNS.

An early morning's view at Winnipeg Fair, 1901.

no doubt, exercised some influence in the production of cattle and horses in Manitoba and the Territories, that are already recognized as superior to the average of those in States that lie to the south. This fact is well brought out in the willingness of our people to buy animals north of the line and to pay the duty on them.

May more and more attention be given to the quality of the stock. The difference in value between good and inferior stock is very great, while the difference in the cost of production is very slight. It was gratifying to the writer to see so good a grade of stock at the various fairs. But it may be remembered there is still much room for improvement.

Before concluding this paper, I will, with the permission of the editor, take this opportunity to express the great satisfaction which I feel in the treatment everywhere accorded me while attending the various fairs, at which it was my privilege to be present. Without singling out any by name, though many are deserving of such notice, I felt that everybody was kind, and as a result the memories of the visit are of the most pleasurable kind.

Note.—We are pleased indeed to have this opinion from such a man as Prof.

Not much enthusiasm was felt as to the hog-raising branch of farming, and very few farmers could see any money in pigs. Probably at that time this opinion was not very far astray, and there was but little to be made out of this kind of stock. The market was a purely local one, and few farmers cared to hazard very much upon the raising of a product in which no regular export business had been established.

Now, however, this order of things is fast passing away. The fact that a ready market for all surplus pork is waiting, and that a larger remunerative and permanent export business may easily be established is becoming more and more patent, and accordingly a large increase in hog-raising may be looked for.

An investigation of the hog business in Alberta is rather interesting. In Southern Alberta but very few hogs are kept, and there is much more inclination to feed the small amount of grain raised to horses and cattle rather than add hogs to the list of consumers. But in Northern Alberta the conditions are different, and the amount of feed for hogs which may be produced is limited only by the amount of land under cultivation. For this and other reasons not necessary here to enumerate, the raising of hogs offers induce-

an increasing scale, and, besides, some ranches close to the sister towns have been operated for hog-raising exclusively. That the Edmonton farmers have found swine-raising profitable may be pretty conclusively inferred from the fact that during the past year the company referred to has packed three times as many hogs as in any previous year. They have during the past 12 months doubled the capacity of their packing house, but in a recent interview with them a Farmer representative was assured that they still cannot get enough hogs to supply the market demands with which they are faced. Just as to the number of hogs thus packed locally we have no figures, but the advantage to farmers of producing largely comes into evidence in the fact that a local exporter, J. J. Duggan, has during less than four months of this season been able to ship away eighteen or twenty carloads of live hogs, each carload of which would bring into the district about \$1,250.

In direct reverse to this lively condition of the hog business at the end of the line, we are assured by butchers at other points closer to Calgary that the number of hogs as yet being raised is not large enough to supply the local demand, and one firm even showed the writer invoices for over \$500 worth of

pork and bacon imported in less than a month and a half this season. This firm assures us that during the past year they have sent away about \$2,800 for pork and bacon which they have not been able to get from the farmers.

And now for the "nigger in the fence"—or, to be more precise, the "niggers in the fence," for in this case more than one "nigger" is present. One of the causes of this unbalanced condition of affairs is the cost of local shipments. The rate for shipping hogs from local points to the end of the branch is something like one-fifth of a cent per pound. The local packer claims that when this is added to other costs of bringing in hogs from outside points it raises the expense to him to close to half a cent per pound, which at close figures would make a difference between profit and loss in hog raising. This means that almost all of the live hogs exported from the C. & E. line have to be shipped through into British Columbia before killing in order to secure the proportionately much better long distance rate of less than half a cent a pound from Edmonton to Nelson. Yet it is manifest that the best interests of the trade demand that the pig be killed in Alberta, rather than be taken so many hundreds of miles before slaughtering.

Another fact worth noting. The fact that a buyer is able to send away so many carloads of hogs from Strathcona, where the local demand is comparatively good, while at the same time nobody has as yet been able to establish a regular satisfactory shipping business from points further down the line, proves that a shipping market becomes more certainly established and more satisfactory to the producer according as the quantity of produce offered is increased.

To those who fear that the B. C. market may be glutted, it may be of interest to quote from one of the correspondents in The Farmer of July 20th that last year \$327,000 worth of bacon and hams were brought into B. C. from the United States.

We are assured at all Northern Alberta points that a live interest is felt amongst the farmers as to the question of hog raising, and that the number of pigs on each farm is steadily on the increase. It is to be hoped that when this movement provides an available surplus at each town the conditions may be met by either satisfactory local packing facilities or freight rates which will constantly ensure the possibility of good prices. When farmers become convinced that hogs are a satisfactory cash article twelve months in the year, the amount of pork raised will increase very rapidly.

Regarding the hog required, the packers at Edmonton describe him as a "choice, long-sided hog of about 225 lbs., and of mixed meat, preferably showing a dash of Tamworth or Yorkshire breeding."

Weaning Pigs.

The usual way of weaning pigs is to shut up the pigs and let the sows run, or it may be that the pigs are shut away from the sow but allowed their liberty. This is not so bad, but a better plan still is to shut up the sow and let the little fellows run. When the sow is shut up, her feed should be reduced, and it will not be long until she is dry. When she is allowed to run and the pigs are shut up she is apt to keep up her full milk supply and the pigs not having access to her, her udder is liable to become caked and injured. If the sow is shut in and an opening left so that the little fellows can have access to her, no trouble this way can occur. Having their liberty, they will hunt food for themselves and soon be independent of their dam. This is the time they should have a liberal supply of sweet skim-milk, for as their mother's supply fails they will take to the milk, and it won't be long before they will be disgusted trying to get it from their mother's dried up udder. At the end of a week they won't go near her, nor will they touch her when turned together again.

Baby Beef.

The young beef cattle of Manitoba are all going to the ranges to be grown into beef, but there is no reason why a lot of them could not be fattened right here. We hear and read a good deal about baby beef being made by the farmers to the south of us, and there should be no reason why farmers here cannot make baby beef also. Year by year the buildings in the province are being improved and more cattle fed. This is as it should be and if attention were given to raising a little more hay and coarse grain for winter feeding it would not be long before a large number of the young cattle now sold to go west would be kept on the farm, fattened over winter and turned off at a good profit in the spring, making additional profit and providing work in the winter for the farm hands. The following account of what has been done at the Kansas experiment station is an index to what can some day be done right here in Manitoba.

In the latter part of October, 1900, the Kansas experiment station put into the feed lots 130 head of calves that had just been weaned. They were divided into lots to test the value of alfalfa hay, prairie hay, corn, Kafir-corn and soy beans in the production of baby beef.

Sixty head of heifer calves were purchased in the Kansas City stock yards, weighed an average of 418 lbs. each, cost \$4.25 per cwt. at the yards, and cost an average of \$18.25 per head delivered in the college feed lots. These were range calves, grade Shorthorn, Hereford and Angus. Fifty head were purchased off farmers near Manhattan and had been kept with their dams through the summer in small pastures. Twenty head were mixed-bred calves that had been purchased around Manhattan when born, and had been raised at the College by hand, ten being raised on creamery skim-milk and ten on whole milk. The calves were vaccinated to prevent blackleg. Without this safeguard we should not have dared to undertake the experiment.

All lots were fed twice daily all they would eat, water and salt were always before them, and they were sheltered in common board sheds opened to the south. The yards were fenced with woven wire.

The calves were fed seven months with the following results:—

Feed	Average gain per head. Pounds.	Grain per 100 lbs. gain. Pounds.	Hay per 100 lbs. gain. Pounds.
Alfalfa hay and corn	407	470	544
Alfalfa hay and Kafir-corn . .	379	524	626
Prairie hay, corn 2-3 and soy beans 1-3	378	520	486
Prairie hay, Kafir-corn 2-3 and soy beans 1-3	342	594	539
Skim milk calves, alfalfa hay and corn	440	439	436
Whole milk calves, alfalfa hay and corn	404	470	420

At the close of the experiment, May 27, the entire lot averaged 800 lbs. per head in the college feed lots. The shrinkage in shipping to Kansas City was three per cent. Thirty-two steers averaged 838 lbs. and sold at \$5.40 per 100 lbs., seventy-four heifers averaged 758 lbs. and sold at \$5.35, and eighteen heifers averaged 741 lbs. and sold at \$5.15. Six head of heifers went as springers.

The remarkable feature of this experiment is the small amount of feed required to make 100 lbs. of gain. Last year the Kansas experiment station reported making 100 lbs. gain on 1,000-lb. steers with 718 and 780 lbs. of corn. Many old feeders wrote us that they could not make such gains with so little feed. Professor Henry reports that he finds the average in a large number of feeding experiments with steers to be 100 lbs. of gain for 1,000 lbs. of grain and 500 lbs. of roughage.

These calves averaged 100 lbs. gain for from 439 to 594 lbs. of grain and 426 to 626 lbs. of hay, about one-half the amount required for matured cattle.

BREEDERS' DIRECTORY.

CARDS under this head inserted at the rate of \$1.50 per line per year. No card accepted under two lines, nor for less than six months.

BUTTER JERSEYS FOR SALE from noted prize-winning stock. Both sexes—all ages. Reasonable prices. **Mrs. E. M. Jones**, Box 324, Brockville, Ontario, Canada. Write for what you want.

D. FRASER & SONS, Emerson, Man. Breeders and importers of Shorthorns, Shropshires, and Southdowns, Pedigree Poland China Pigs a specialty from the best strains in U. S.

JAS. MURRAY, Lyleton, Man., is offering his entire flock of Border Leicester for sale. This flock has won the flock prize eight years in succession at the Winnipeg Industrial.

K. McIVOR, Roselawn Farm, Virden, Man., breeder of Shorthorn Cattle. Introducer and grower of Western Rye Grass. Four young bulls of quality from 11 to 14 months old.

JAS. GLENNIE, Longburn, Man., importer and breeder of Holstein-Friesian Cattle. Bull calves of the famous Teake strain for sale. Write for prices. Box 95.

JOHN TURNER, "Bonnie Brae Farm," breeder of Polled Angus Cattle. Young stock of both sexes for sale. John Turner, Carrol, Man.

H. V. BYERS, Maegregor, Man., breeder Jersey Cattle. Largest herd in West, headed by Rover Pogis, No. 4020. Young stock for sale.

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WM. M. CHAMPION, Roselawn Farm, Reburn P.O., Man., breeder of Ayrshire Cattle, Berkshire Swine and White Rock Fowl.

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W. C. EDWARDS & CO., Rockland, Ont., importers and breeders of Shorthorn Cattle, Shropshire Sheep and Berkshire Pigs.

A. CUMMING, Rosebank Farm, Lone Tree, Man., breeder of Polled Angus cattle. We have a few bulls and heifers for sale. Write.

D. E. CORBETT, Swan Lake, Man., breeder of Shropshires. A few nice shearing rams and ram lambs; also ewes.

JOHN TRAQUAIR, Welwyn, Assa., Polled Angus Cattle, Victoria's Queen mothers, Charmers, Mayflowers, etc.

JOHN S. GIBSON, Morden, Man. Young Shorthorn Bull for sale. Poland China Pigs and pure bred Plymouth Rock Poultry.

J. H. KINNEAR & SON, Souris, Man., breeders of Shorthorns and B. P. Rocks. Eggs \$1.50 per 13. Young bulls for sale.

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ALEX. STEVENSON, Brookside Farm, Wakopa, Man., Shorthorn Stock for sale.

L. A. BRADLEY, Portage la Prairie, Man., breeder of Tamworths. Young pigs for sale.

WM. CHALMERS, Hayfield, Man., breeder of Shorthorns. Correspondence Solicited.

GEO. ALLISON, Burnbank, Man., breeder of Shorthorns and Leicesters. Stock for sale.

STEEL BROS., Glenboro, Man., Breeders of Ayrshire Cattle. Young stock for sale.

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G. & W. BENNIE, Castleberry, Man., Shorthorns and Clydes. Young stock for sale.

WELLINGTON HARDY, Pomeroy, Man., breeder of Ayrshires, Yorkshires, Black Minorcas.

S. WHITMAN, Souris, Man., breeder of Tamworth Swine. Young Pigs for sale.

F. B. MILLER & SONS, Solgirth, Man., breeders of Herefords. Write.

W. N. CROWELL, Napinka, Man., breeder of Shorthorns, Berkshires. Stock for sale.

T. R. TODD, Hillview, Man., Shorthorn Cattle and Oxford Sheep. Young Stock for sale.

F. J. COLLYER, Welwyn, Assa., breeder of Polled Angus and Berkshires. Young stock for sale.

D. ALLISON, Stronsa Stock Farm, Roland, Man. Shorthorns and Berkshire Swine.

W. E. BALDWIN, Manitou, Man., Tamworths new blood (imp.). Young pigs for sale.

JAMES WILSON, Innisfail, Alta., breeder of Shorthorns. Young stock for sale.

JICKLING & SONS, Dewdrop Ranch, Carman, Man. Oxford Down Rams for sale.

JOHN WALLACE, Cartwright, Man., breeder of high-class Herefords.

ALEX WOOD, Souris, Man., breeder of Oxford Down Sheep.

JOHN LOGAN, Murebison, Man., breeder of Shorthorns.

WANT, SALE, EXCHANGE

Under this heading will be inserted advertisements of farm properties, farm machinery, etc., for sale and exchange, farm help wanted, articles wanted and other lines of miscellaneous advertising.

TERMS—One cent per word each insertion, payable strictly in advance, name and address to be included in the count. No advertisement will be taken for less than 25 cents.

For Sale.—S.W. qr., 36-7-28, five miles from Reston, 100 cultivated. A snap for a cash buyer. Ernest J. Wilkins, Reston, Man.

For Sale.—A limited number of M.B. Turkeys, B.P. Rocks and Berkshire Pigs. Address E. S. D. Dustin, Box 11, Alexander, Man. 15-22

For Sale.—Golden Wyandottes, five yearling hens and cock, good ones; also Barred Plymouth Rock cockerels, beauties. H. Lee, Shaw Farm, Yorkton, Assa.

A Snap.—North half of 28, 9, 22, 2 1/2 miles from Griswold, over 200 acres under cultivation, 100 in wheat, 10 buildings, price \$20 per acre, easy terms. Apply to E. W. Hanna, Griswold, Man.

Ranch for Sale, with an unlimited open range, abundance of good hay and water, timber and shelter, with or without stock, ten miles north of Elm Creek. Apply to Jickling & Sons, Carman, Man. tf

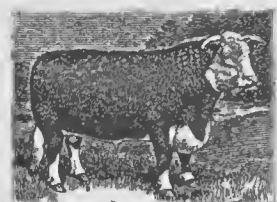
For Sale.—Splendid Stock Farm, north of Minnedosa, one half-section, good buildings, nine roomed house, stabling for 80 head of cattle, and a live spring on the place, all fenced, plenty of feed, also 20 Hereford cattle, splendid chance for right man. For further particulars apply to Peter la Bouteiller, Clanwilliam, Man., or Myers & Robinson, Minnedosa.

Agents Wanted for the New Pictorial Doctor and Live Stock Cyclopaedia, revised to 1901 with the assistance of the Professors of the Ontario Agricultural College, Guelph Ont. The finest illustrated, cheapest and best book of its kind ever published. Large wages for agents. Particulars mailed free. Address World Publishing Company, Guelph, Ont. tf

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January and March pigs of either sex of good quality. One sow in pig, due to farrow in August. Address

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Fox Terrier puppies for sale in April, sired by Norfolk Bowler, brother of champion Victorious.

Norfolk Bowler's service fee is \$20.

All dogs eligible for registration.

W. J. LUMSDEN, - Hanlan, Man.

When writing, please mention this paper.

Treatment for Roundworms in Sheep, Goats and Cattle.

The Bureau of Animal Industry division of the U.S. Department of Agriculture has issued an excellent bulletin on the above topic and we give the following extracts from it:—

Sheep, goats and cattle suffer from the effects of roundworms. This is especially true during wet years. These parasites are found particularly in the lungs, the fourth stomach, and the bowels, and, when present in large numbers, they may result in the death of 5 to 50 per cent. of a flock. For some of these parasites treatment is possible; but for others, treatment has not been found altogether satisfactory.

Treatment.

Roundworms which live free in the fourth stomach or in the bowels may be expelled by using various drugs in drenches. A long list of medicines might be mentioned, but many of the drugs most highly recommended frequently fail to effect a cure. Failures are due to several causes: The drug itself may be of little or no value; it may not be administered in the proper dose; it may not be administered in the proper way.

One of the most commonly used drenches is turpentine, but more satisfactory results are obtained from the use of coal-tar creosote, or coal-tar creosote and thymol, or gasoline, or bluestone.

Coal Tar Creosote.

I have had excellent success in treating sheep, goats and cattle for the twisted wireworm (*Strongylus contortus*) with a 1 per cent. solution of coal-tar creosote. The medicine is easily prepared and quite inexpensive. It may be purchased of the druggist in small quantities of one ounce, or in pound bottles. One ounce is sufficient for about 20 adult sheep, and the cost of the treatment is less than one-half a cent. per head; if creosote is purchased by the pound, the cost is reduced to less than one-quarter of a cent per head. If creosote is called for at a drug store, *beechwood* creosote will usually be dispensed. This is more expensive than the *coal-tar* creosote and not so satisfactory in expelling worms.

A 1 per cent. solution of coal-tar creosote is made as follows: Coal-tar creosote, 1 ounce; water, 99 ounces (99 ounces equals 6 pints and 3 ounces). Twisted wireworms (*Strongylus contortus*) taken directly from the stomach of sheep or cattle die in one-half to one and a half minutes when immersed in this solution.

If, in dosing, this liquid enters the lungs the animal may succumb in a few minutes. If the dosing is performed carefully, as much as 6 2-3 ounces may be given to a full-grown sheep without fatal results. In some cases, however, the animal shows ill effects, from which it usually recovers within half an hour. Six ounces were given to a number of sheep without the slightest ill effects. The following table gives the doses of the 1 per cent. mixture which were used in about 400 cases without ill effects:—

Lambs, 4 to 12 months old—2 to 4 ounces (about 60 to 120 c. c.)
Yearling sheep and above — 3 to 5 ounces (about 90 to 150 c. c.)
Calf, 3 to 8 months old — 5 to 10 ounces (about 150 to 300 c. c.)
Yearling steers — 1 pint (about 48) c. c.)
Two-year-olds and above — 1 quart (about 960 c. c.)
Sheep, goats, and calves which received this treatment showed a marked improvement a few days after receiving a single dose.

In experiments with creosote at Washington, D. C., sheep were drenched with a 1 per cent. solution and killed immediately afterwards. Upon opening the fourth stomach, it was found that the wireworms present were dead. Creosote does not appear to have much effect upon the worms below the stomach.

If an overdose is given by mistake, and if the sheep appears severely affect-



HACKNEY STALLION, ROBIN ADAIR.

Robin Adair, 11 years old, is owned by Rawlinson Bros., Calgary, Alta. Sired by the 1897 and 1898 Islington champion, Rufus. Dam, Fantail, by Denmark. Robin Adair was a winner at Islington before being imported by his present owners as a yearling. The number of splendid stallions of his get being used in the Calgary district shows his strong prepotency as a sire.

ed by it, the animal should be placed in the shade. Even in some cases of very severe overdoses, where the animal is given up for dead practically, it may entirely recover within an hour or so.

Coal-Tar Creosote and Thymol.

If, in addition to the stomach worms, the animals were suffering from severe infection of bowel worms, such as the hook worms, better results were obtained in the treatment when powdered thymol was added to the creosote. In cases of this kind, the creosote solution is prepared, as directed above, and 30 to 80 or even 100 grains of thymol added to each dose after it has been measured.

Thymol is expensive, the price varying in different parts of the country. It may be purchased by the ounce, but it is considerably cheaper if purchased by the pound. Avoid using thymol which has become yellowish or reddish and which has run together in the bottom so as to form a solid mass. Powder the crystals and have the druggist measure 30 grains. Give 30 grains to a lamb, about 50 grains to a yearling, and 70 to 80 or 100 grains to older sheep, according to size.

In experiments I have had excellent results with a single dose of the creosote and thymol mixture. If necessary, however, the dose could be repeated after a week.

Although Dr. Salmon likes the above the best, he gives the treatment followed by Hutcheon in South Africa with bluestone. The trouble about this treat-

ment is that the weights have to be exact, and if the solution is too strong it will poison animals, while, if too weak, it will not kill the worms. Gasoline has gained considerable reputation as a vermifuge in recent years, but there are serious objections to its use. It takes not less than three doses, usually four to six, to expel the worms. The repeated doses cause severe congestion of the bowels and the extra handling is impracticable with range sheep. Animals suffering from pleurisy are apt to die.

Methods of Drenching Animals.

The popular method of drenching is with a bottle. The use of a drenching tube is, however, far more satisfactory. A drenching tube may be made by taking an ordinary tin funnel, which may be purchased for five or ten cents, and inserting the narrow end into one end of a rubber tube or hose, say three feet long and three-eighths or one-half inch in diameter; into the other end of the rubber tube is inserted a piece of three-eighths-inch brass or iron tubing about four to six inches long.

The metal tube is placed between the animal's back teeth, and the sheep or calf is allowed to bite upon it. The water or drench is poured into the funnel, which may be held by an assistant or fastened to a post at a convenient height. The man who holds the metal tube between the animal's teeth can control the animal's head with the left hand, and by holding the tube in the right hand, near the point of union of

the rubber and metal tubes, he can easily control the flow of the fluid by pinching the rubber hose. Care must be taken not to hold the patient's nostrils closed, otherwise the dose will enter the lungs.

It is usually advisable to fast animals 12 to 16 hours before dosing.

Position of the Animal During Drenching.

Different persons prefer to hold the animals in different positions during drenching. Thus (1) the animal may be left standing on all four feet; or (2) it may be placed on its haunches, one man holding its back up against his own body; or (3) it may be placed directly on its back on a sloping piece of ground, its head being in a direct line with its back, and higher than its rump; or (4) it may be placed upon its side, the head being brought around so that the horns are squarely on the ground; the operator may then place one foot on one of the horns (especially in the case of semi-wild cattle) and thus aid in holding the animal still.

So far as administering the doses is concerned, the position on the back (3) is by far the easiest in the case of sheep, and the side position with head down (4) is the easiest in dosing cattle; furthermore, in these positions there is much less danger of an accident by getting the dose in the lungs. If animals are dosed standing or on their haunches, the nose should never be allowed to go above the eyes; otherwise the drench may pass down the windpipe into the lungs.

By dosing sheep with water colored red and blue with dyeing material, and killing the animals immediately after the liquid was swallowed, the following results were obtained:—

If the dose was given with the sheep standing (1), almost the entire quantity went directly into the fourth stomach; if the sheep was placed on its haunches, the fluid passed in part into the fourth stomach and in part into the first (the paunch); if the sheep was placed directly on its back (3), or if a steer was placed on its side (4) with head down, almost the entire dose passed into the first stomach (the paunch). If the animal, even when standing (1), struggled to a considerable degree, a portion of the fluid passed into the paunch.

It will be immediately apparent that these facts are of practical importance in dosing. If, for instance, gasoline, turpentine, or creosote is used, better results may be expected if the sheep is dosed standing (1).

Preventive Measures.

1st. Every ranch should have a hospital pasture situated on high, dry ground, well drained, and without any pools or ponds; this should be supplied with raised troughs for watering and feeding, and the water supply should come from a well. This pasture should not drain into any pasture in which healthy stock are feeding.

2nd. As soon as any sick animal is noticed in the large pasture it should be immediately separated from the healthy stock and taken to the hospital pasture. To allow sick animals to run at large with healthy stock means to deliberately permit the spread of infection in the pastures and thus endanger the uninfected animals.

3rd. Proper watering places should be supplied in the large pastures by digging wells and erecting windmills to pump the water into tanks. These tanks should be raised above the ground so that they can not become contaminated with the animals' droppings being washed into them by rains and floods.

4th. Select high, sloping ground for pasture when this is possible. Low pastures should be properly drained.

5th. When practicable, burn the pastures regularly, thoroughly and systematically. The heat from the burning grass will kill many of the eggs and young worms on the grass, ground, and in the droppings.

6th. As parasites are more fatal to young animals than to old, a liberal supply of oats or some similar food will aid in giving to young animals strength



PRINCESS PATRICIA, THE PROPERTY OF JOHN A. TURNER, BALGREGGAN STUD FARM, CALGARY, ALTA.

Princess was 1st at Calgary, and sweepstake female; 1st at Winnipeg and champion female. Her foal, Charming Princess, by Lord Charming, was also 1st at Winnipeg.

which will enable them to withstand the infection. A daily allowance of, say, half a pound of oats per lamb ought to reduce the mortality. At first they may not be inclined to eat it, but they will soon become accustomed to it. This simple precaution is reported as very effectual in New Zealand.

7th. Keep plenty of salt accessible to the animals. Some men add slaked lime to the salt; others add one part of sulphate of iron to 100 parts of salt. As a matter of experience, salt kills many young worms.

For the minute worms encysted in the fourth stomach, and also for those forming nodules in the bowels, no treatment is known.

For worms in the lungs, numerous methods of treatment have been suggested, and success has been claimed for certain remedies. None that we have tried, however, has proved satisfactory.

No practical medicinal treatment is known for flat worms of the liver, and the treatment for tape worms in the bowels or ruminants is frequently unsuccessful.

How to Tether Your Beast.

Mr. F. W. Godsall, of Pincher Creek, has shown us an idea in regard to tethering animals which many of our readers will find of great value. Instead of driving in a single peg and tying his rope to it, as do most people, he takes a long, strong wire and fastens it to a peg at either end. The pegs are driven into the ground as far apart as the wire can easily be stretched by hand, and the tether rope is fastened to a ring sliding on the wire. If the wire used is 100 yards long, and the tether rope 50 feet, the animal is allowed to graze over about three-quarters of an acre. As the wire is tight and lies flat upon the ground, there is no fear of an animal becoming entangled in it. Of course it is preferable not to stretch it across a hollow. A strong single fence wire is strong enough, or perhaps the plain double twisted fence wire would be better, as the two-stranded kind possesses a little more elasticity. The wire should be burned before using, so as to prevent its breaking if it should become kinked in changing the pegs.

The same plan on a modified scale is used by some for tying a dog. Instead of fastening the usual short chain to the dog-house or other place, fix up a wire between some near by points and fasten the chain to a ring on this wire. By a little planning the dog can be so tied in this way that he can have a run and not be compelled to lie still all day long. He won't get cross so quickly.

Short Course in Stock Judging.

The Ontario Agricultural College announces this fall a short course of two weeks in stock judging, to commence on the 8th of January, 1902. It will include judging horses, cattle, sheep, swine, seed grain, grass seed and clover seed. This is a special course for farmers, farmers' sons and stockmen, and such a course as should have been started years ago. There are hundreds of boys who would like such a course but who have not time for the longer regular one. We feel sure that this course will be well filled and is destined to become a very popular one. It may detract a little from the regular one at first, but the general knowledge gained at it will only whet the appetite for a deeper, fuller knowledge of the subject and bring the student back at a later period for the full course.

Another course that is bound to be very popular is the one of four weeks in poultry raising, commencing on January 10th. Both of these courses we feel sure will be good ones and the college is to be congratulated in having instituted them. We will watch their success with interest.

Oats fed to growing pigs will produce bone and muscle.

The Ontario Winter Show.

It has been decided to hold the annual provincial winter fat stock show at Guelph the week following that of the International one at Chicago, which runs from Dec. 1 to 7. The show at Guelph will open on Dec. 10th and close Dec. 14th. Some changes will be made in the prize list this year and other improvements which it is thought will work for better results. Slaughter tests will be continued as in other years, and this year it is proposed to sell the carcasses by auction after the fair is over. The competition in dressed carcasses for sheep will this year be confined to wethers. Three prizes will be given in all classes.

A new departure will be made this year in offering a prize for export steers. It was felt that the excessively fat animals shown were useless for export purposes, consequently a section has been made with prizes \$50, \$25, \$15 and \$10 for the three best export steers owned and fed by the exhibitor.

The question was well discussed of returning to an old rule that had been dropped some years ago—that of confining the exhibits to animals bred by the exhibitors. This would give breeders a better chance. The cattle men opposed such a motion, but the sheep and swine men thought it would be an advantage. A motion was then carried limiting the sheep exhibits next year to animals bred by the exhibitor. A motion was also adopted providing that at the coming fair all swine entered in the bacon classes and also all swine under nine months must be bred by the exhibitor.

A World's Fair at St. Louis.

Another world's fair! This time at St. Louis, Missouri, to be held in 1903, and timely notice of its leading features is being sent out thus far in advance. A century ago the little-known country along the valley of the Mississippi and its tributaries was claimed by France, and Napoleon sold that claim to President Jefferson for \$15,000,000, thinking possibly that he had made a capital deal. That area covers fourteen States and Territories, now among the richest in the Union, and this show will figure as the centennial of that "Louisiana purchase," as it is historically called. This show, besides the usual features of such great displays, will have as one of its special features a display of the agricultural and horticultural products of the old Louisiana territory against which the older states and the world at large will be invited to compete. One feature will certainly be unique. Grapes will be planted in the spring of 1902 both outdoors and under glass, so as to be under full fruitage all the time of the show. Oranges, lemons, etc., will also be grown under glass, thus giving the finest possible display of growing fruits yet attempted. The ordinary fruits and products of the territory backing the exposition will be grouped to show the horticultural possibilities of its soil and climate, in contrast with all comers.

More money will be offered in premiums on live stock than ever before, and every kind of domestic animal will be included in the list. Think of the miles alone that they can put in the ring!! The live stock in this territory is valued at \$1,000,000,000, and they raise yearly a billion bushels of corn. By sending abroad this preliminary notice the management of the fair desire to put every possible competitor on an equal level as to preparedness for the event. They are up against a big proposition and mean to do it every justice.

When a sheep seems the least bit lame it should be caught and examined immediately.

It is a surprise to see how many farmers neglect to keep salt in their horses' mangers. It is very inexpensive and very beneficial. A lump or chunk should be kept in every manger.

PRIZE-WINNING

POLAND CHINA And TAMWORTH Swine



One of the best herds in the Dominion for show and breeding. Show-ring record proves this assertion. Klondyke Gold Dust, 1453, and Havfield Pride, 1980, the equal of any males East or West, used in this herd. Sows from the noted prize-winners, Manitoba Chief, 1221, Chief Radiant, 39839, Free Trade Sanders and other strains. 40 spring pigs for this season's trade. If you want a good show pig or a herd header, write. We have just as good as can be found East or West. Give us your order—we guarantee satisfaction. Prices reasonable.

W. L. TRANN - Crystal City, Man.

HOPE FARM GALLOWAYS

The largest herd of Registered Galloways west of the Great Lakes. Send for catalogue to

T. M. CAMPBELL, Manager, Hope Farm, St. Jean Baptiste.

D. McBETH, OAK LAKE MAN.

BREEDER OF

Clydesdale Horses

AND Shorthorn Cattle



I have a number of promising young Stallions for sale. My shorthorn herd is headed by "Best Yet," bred by Hon. John Dryden, of Brooklyn, Ont. A number of young stock of both sexes, all registered, are for sale, and can be recommended as first-class animals. Correspondence solicited. Prices right.

Thorndale Stock Farm

24 SHORTHORN BULLS
30 " FEMALES

For sale. They are a good strong lot. Write to

JOHN S. ROBSON, Manitou, Man.



The Gold Standard Herd.



Prize winning Berkshires at reasonable prices including the following Winnipeg winners: "Duke of Clifford," two years old, never beaten in the show ring, first in his class in 1900 and 1901. "The Baron," bred by Thos. Teasdale, Ontario, second prize under 12 months, 1901. Two prize winning sows in class under six months. Three nice sows farrowed in March off first prize sow and litter at Winnipeg. Spring pigs, also August and September farrows at right prices. Address

J. A. MCGILL, - Neepawa, Man.

FOREST HOME FARM.



Shorthorns, Yorkshires and B. P. Rocks

At reasonable prices. A few choice young cows, heifers and heifer calves. Yorkshire pigs, both sex, sired by Imp. Summer Hill Premier and out of our choicest sows. A couple of sows in farrow for sale.

Carman, C.P.R. Roland, N.P.A.
A. GRAHAM, Pomeroy, P.O.

J. E. SMITH

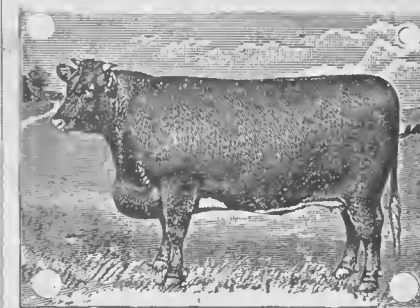
OFFERS FOR SALE

3 CLYDESDALE STALLIONS

All prize-winners and fit to head any stud. Two of them imported from Scotland, three to six years of age. These stallions, all of good form, ample weight, good colors, and choice quality, were personally selected, and the best that money could buy. In order to make quick sales will be sold on a very small margin. Intending purchasers of a good useful stallion would consult their own interests to inspect these stallions before buying. Also for sale FILLIES and MARES, all ages. SHORTHORNS—bulls, cows and heifers, all ages, sired by Lord Stanley II and Golden Measure (imp.). A useful lot of breeding Shorthorns can be seen at Smithfield. All are kept in breeding trim. Buyers in search of moderate-priced cattle should not fail to see them. Come and see the stock. You will find it just as represented, and prices right.

J. E. SMITH, Smithfield Ave., BRANDON. Telephone 4. P.O. Box 271.

GOLD MEDAL FOR HOME BRED SHORTHORN HERO IN 1899 AND 1900



Young Bulls and Heifers for sale, sired by Nobleman (imported), Topsman's Duke and Topsman, champion bull at Winnipeg, Toronto, London and Ottawa in 1899.

This herd also won the Open Herd Prize against all comers and first for bull and two of his get. This is the Herd to buy from.

Berkshires and Yorkshires.
J. G. BARRON, Carberry, Man

J. A. S. Macmillan

Importer and Breeder of Pure-Bred



Clydesdale, Shire and Hackney Stallions and Mares, Shorthorn Cattle and Shropshire Sheep.

Correspondence solicited. Inspection invited. Prices right. Terms easy. Full particulars on application. Apply P.O. Box 484, Brandon, Man.

Oak Grove Farm



SHORTHORNS, YORKSHIRES, WHITE P. ROCKS FOR SALE

Number of choice heifers. Boars fit for service 10 and 12 months old. Winnipeg prize-winning sows due to farrow. Place your orders now. W. P. Rock cockerels and eggs for sale.

JAS. BRAY, Longburn, Man.

Herefords Herd headed by "Sir Ingle-side 2nd," descended from the famous "Corrector." Ayrshires include many winners at leading fairs.

ED. T. PETAR, Parkdale, Man.

HOLSTEINS YORKSHIRES BERKSHIRES

If you want the best, see my Holstein Cattle and Yorkshire and Berkshire Pigs at Virden, Brandon and Winnipeg fairs.

A. B. POTTER, Montgomery, Asa.

Maple Grove Farm, Portage la Prairie.



Shorthorn Cattle and large English Berkshires. My stock boar, Highclere King, took 1st at Winnipeg in 1900 and 1st and Diploma at Portage la Prairie, 1901. A grand lot of young stuff of both sex for sale; also a few M. B. Turkeys. Call or write. Parties met by appointment.

J. A. FRASER, Proprietor

When writing advertisers, mention The Nor-West Farmer.

Encouragement of Horse Breeding.

Apropos of breeding military remounts, the Government of India seems to have hit upon a feasible plan. Thoroughbred stallions are purchased by the Government and these travel the country districts. Every owner of a good mare, if he desires to have her rear a foal, has the use of one of these horses gratis. The only conditions imposed are that the mare must be of an approved type, adapted for breeding the stamp of stock which is required by the Government, which must have the first offer of the progeny. The price paid is a generous one and it is optional with him whether the young horse is to be taken off his hands at one, two, three or four years old, at a sliding valuation.

Both in Manitoba and the Territories the only legislation on the statutes dealing with the question of horse breeding is the Horse Breeders' Lien Act. This is a useful piece of legislation which provides for the voluntary registration with the Department of Agriculture of stallions, the stipulation being that they are to be registered in a recognized stud book. The effect is that the public is protected, against spurious pedigrees while the stallion owner gets security for service fees. It is a question whether the time is not ripe for a voluntary veterinary inspection for hereditary faults, of stallions standing for public service, so as to enable the owners to obtain a Government guarantee of soundness. This would attract patrons and in time public opinion would force all stallion owners to register their horses under the act.

Another useful work which the two Horse Breeders' Associations might appropriately undertake, or induce the Government to undertake, is the issuing of well-illustrated pamphlets showing the type of horses wanted for army purposes. This is the form which the efforts of the German Government takes, and with pronounced success. When it is realized that in a gun team, the wheelers, the centres and the leaders are all of quite distinct type, the necessity for such instruction, in a country where there is no opportunity of inspecting finished military horses, must be apparent.

Connecticut Experience With Tuberculosis.

The war of theoretical opinion over tuberculosis now going on makes it specially important that due weight shall be given to everything calculated to give light along practical lines. The Connecticut experiment station has been working carefully on the matter for the last three years, the disease having gained at that time a footing in their herd, as the authorities confidently believe through the purchase of a diseased animal some time previously. They applied the tuberculin test with the result that twelve reacted in 1898, 5 in 1899, and 1 in 1900. Previous to the infection, the herd had annually been tested with tuberculin for a number of years and with no reactions.

The herd was divided in 1898 into two divisions—healthy and reacting. Since the division there have been two reactions in the healthy herd in 1899, and one in April, 1900. Since that time there have been no reactions in this herd, although all or part of the infected animals have been kept during this time in an adjoining barn with the same attendant for both herds.

The infected herd has produced offspring (now 5 months to 2 years old) as follows: Nine from diseased sire only, three from diseased sire and dam, five from diseased dam only. These have been raised to replace the infected herd and in no case has there been a reaction. The post mortem of several of the reacting animals has shown the disease encysted, indicating a partial recovery.

A few years ago the State of Connecticut spent thousands of dollars in an attempt to eradicate tuberculosis—

condemning and destroying all animals that responded to tuberculin. They have now gone to the opposite extreme and only condemn an animal when by physical examination it shows strong symptoms of the disease. They have in fact gone as far to one extreme as in the early days they went the other way.

The Proportions of a Horse.

In an address on the symmetry of horses, R. A. Ramsay, an American veterinarian, gave the following rules, which, in a general way, constitute the foundation of the symmetrical proportions. The head is taken as the standard of measurement:—

"1. Three and a half geometrical lengths of the head give the entire height of the horse, counting from the top of the forelock to the ground upon which he stands, provided the head is well carried.

"2. Three lengths of the head equal the height of the body from the top of the withers to the ground; the length of the same body from point of shoulder to the point of the buttock inclusive.

"3. A whole head gives the length of the neck from the summit of the withers to the posterior part of the poll, measuring in a straight line; the height on the shoulders, from the top of the withers to the point of the elbow; the thickness of the body, from the middle of the abdomen to the middle of the back; the width of the body, from one side to the other."

Our Farmers Compared.

It is not always well to see ourselves as others see us—it might cause heartburnings; but the competition of the times demands that we keep pace with the market we are catering to and the improvements made from time to time. In order to do this we must measure ourselves with our competitors, and if not satisfied with the results of the comparison we must prepare to advance. F. W. Hodson, the Dominion Live Stock Commissioner, has recently returned from England, where he has been looking into the markets for our products, the conditions of the live stock industry and been on the lookout to pick up information of value to stockmen in Canada. He is reported in the daily press as saying on his return:—

I found the average British farmer a very much better breeder and handler of live stock than the average Canadian or American, even in our best districts.

Except in the matter of pig growing the British farmer is very much ahead of the Ontario farmer. It is quite true that here and there sections may be found where a very fine grade of bacon is produced, but, taking the whole country, it is safe to say that the hogs bred in Great Britain would rank No. 3 at any of our packing houses.

In sheep breeding the British farmer seems to have almost reached perfection. They are producing there on a very large scale very much better sheep than in any part of America.

The rank and file of the cattle are not only better than ours, but they are also much better cared for and better finished for the butcher, not abnormally fat, but fed so that the carcass will produce a large amount of lean meat.

Horses in all grades are better kept there than they are here, and are finer specimens than are to be seen in Canada. The Englishman, I may remark, is a perfect horseman. The horses in England are not worked as long hours as they are in Canada or the United States, and receive a great deal more grooming and attention, and they show it.

But, while the live stock in Britain is, on the whole, better than ours, we have many breeders of pure-bred live stock who are doing better work and producing animals which give better results than nine-tenths of the pure-bred animals that are to be obtained in Great Britain.

I found the English farmer to be an exceedingly skillful man in the cultivation of the soil. The farm hands there understand thatching and stacking better than do our people, but in England the farm implements and machinery are at least one hundred years behind those in use in Ontario or Manitoba. The ploughs, harrows, cultivators, and seed drills used by the best English farmer are such as our people would not tolerate for a day."

It is better to feed twice a day and feed regularly than to undertake to feed three times and to feed irregularly. With hogs regularity of feeding is an important item.

The Return of the Horse.

A few years ago we were confidently told that the day of the horse was over and that electricity, the bicycle and the automobile was going to displace him altogether. A few years ago it did look somewhat that way. The rapid introduction of the "trolley" system on street cars displaced many thousands of horses and weakened the yearly market for that class of horse. The general industrial depression which prevailed at the time also helped to give people the idea that there was some truth in the assertion. As a result horse breeding was discontinued to such an extent that there was soon a shortage. We are not over the effects of that shortage yet and prices continue good. The large number of the poorer class of horses that has been purchased both in the U. S. and Canada for army purposes has also tended to keep up prices. In Western Canada the extensive settlement that is taking place also calls for a large number of horses, so that it will be some years yet before we are face to face with an over-supply of horses.

Besides all this, there is another reason why the horse will not go out and why he will always be bred. This reason is so well put by the Bookman that we quote as follows:—

It is somewhat interesting to note that the demand for horses is greater now than at any time within the past ten years, and that saddle-horses in particular command higher prices than ever before. The immediate

in whatever grade of life you find them, may lack many desirable qualities, but in them the human element is always very strong. They may be crude; they may be vulgar; but there is always in them a certain gentility and mellowness and generosity which render their companionship delightful.

But does not this lead us to another thought? If electricity has done away with the street car horse and increased the demand for fine saddle and handsome carriage horses, it means that horse raisers must try and raise a higher quality of horse than ever before. More thoughtful attention must be given to breeding if we are to have a produce that will command the highest market value. Along the lines of heavy draft horses we cannot get them too large and heavy, provided they have the necessary quality along with the size. It won't do to breed indiscriminately any and every mare a farmer owns; on the other hand, to use any sire that comes along is equally unwise. To do so will end in the possession of animals lacking in essential qualities for first-class heavy draft horses and fit only for such purposes as street car work, did it exist—work for which the cheapest classes of horses are used. There is no use breeding horses that we know will be in this class. We want something better, and it will cost nothing more to breed and raise the right kind. Then there is the same thought about the lighter horses. Good saddlers, coach, and carriage horses are in demand at high figures. Look ahead and see if possible what the demand is going to be;



CHAMPION STAR [5692.]

Two-year-old Shire Horse, Champion Star [5692], owned by W. H. Belson, Grenfell, Assa. First in class at Winnipeg Industrial, 1901.

cause of this is to be found in the change that has come over the social life of those among us who possess great wealth and who have the leisure necessary for its enjoyment. The popularity of the horse rests upon a sound and lasting basis; for bicycles and automobiles are fads of the moment, while the love of the horse is rooted in something which is immutable. There is a certain exhilaration to the possession of a good mount. First of all, the rider of the horse finds in his animal not merely a means of locomotion, but a feeling of companionship which can come only from contact with something that is alive and intelligent instead of that which is inert and entirely mechanical. A horse is not an implement or an engine, but it is something that lives and breathes and knows and feels—something that can recognize its rider, that answers to his touch upon the rein, and that responds at once to his control and to his liking. Moreover, the limitations upon the horseman are very few. To him not only is the highway open, but the fields as well, the rocky hillside and those delicious bridge-paths that penetrate the heart of the dewy forest all redolent of the fresh earth and the cool leaves, and eloquent of nature in its simplicity and restfulness. The horseman rides along with a certain exaltation, a deep and lasting pleasure utterly unlike the tense absorption of the scorching with his set bicycle-face and his eternal preoccupation over the various objects which may at any moment upset his machine and leave it with a punctured tire. The moral influence of a horse is also very noticeable to one who studies human beings. There is something noble about a horse, and his intelligence is so nearly human that he humanizes those who love him. Horsemen,

then try to raise horses that will meet the demand. The love for a fine horse will always exist and men with means will always be willing to pay a high price for what they want. In the production of horses of this stamp there will always be a good market for them, even in periods of low prices and overstocked markets.

Brood sows of desirable qualities should be kept several years.

Customer—"Didn't you tell me this horse was afraid of nothing?" Dealer—"That's just what I said." Customer—"Why, he shies at his own shadow." Dealer—"Well, a shadow is about as near nothing as anything I know of."—New York Weekly.

FITS
Liebig's Fit cure for Epilepsy and kindred ailments is the only successful remedy, and is now used by the best physicians and hospitals in Europe and America. It is confidentially recommended to the afflicted. If you suffer from
EPILEPSY, FITS, ST. VITUS' DANCE,
or have children or relatives that do so, or know a friend that is afflicted, then send for a free trial bottle and try it. It will be sent by mail prepaid, if enclosed where everything else has failed.
When writing mention this paper, and give full address to
THE LIEBIG CO., 179 King street west, Toronto.

Bloat in Cows.

This is a comparatively rare trouble in Manitoba. When it does happen, the following may be of interest. A reader of The Farmers' Review says:—"My first experience with a bloated cow was with a valuable Shorthorn. She had been fresh about four weeks and was doing finely, when she got too many apples. I first tried a bit in her mouth, but that did no good. So I then gave her two tablespoonfuls of black gunpowder dissolved in warm water. In a very few minutes the gas began to leave her in a very emphatic manner. In twenty minutes after giving the gunpowder she was eating grass. Had one Jersey cow that would bloat on dry clover, i. e., clover that had neither rain nor dew on it. Have never seen a bloated cow that the gunpowder would not help."

Lambs intended for market should be kept in a good growing condition.

Sheep for market sell better if they are all of one breed, size and color.

Almost any kind of grease or oil applied to the skin will kill lice on hogs.

Sheep are docile, easily managed and will live on a great diversity of food.

A cross-bred male cannot be relied upon for producing uniform offspring.

The quality of the pork may be much improved by careful and cleanly feeding.

The hog will adapt himself to circumstances better than any other animal.

Sheep will do better if they can have access to all of the salt they can eat daily.

A good reason for having sheep uniform is that they will feed together better.

Good feeding consists in giving all that the hogs will eat without leaving anything.

Hogs at all times should have salt and charcoal where they can help themselves.

Estimate the value of sheep from the standpoint of meat and of advantage to the farmer.

The food of growing pigs should be largely of nitrogenous or muscle-forming to give the best results.

St. Louis, Mo., is planning for a "world's fair" for 1903. Surely we are entitled to a little rest from "world's fairs."

As soon as her pigs are large enough to follow her about a sow with a litter of pigs should have the run of a good pasture. Her pigs will be healthier and thriftier and make a better growth than if confined.

Russia produces 240 million pounds of wool a year, the record of Europe; Britain comes next with 160 millions; then France, with 126 millions; Austria produces 420 millions, and the United States 320 millions.

F. W. Hodson, Dominion Live Stock Commissioner, speaking with reference to Canadian bacon on the British market, said recently on his return from England: "One dealer in London informed me that Canadian bacon is probably the most important meat product that reaches the English markets today, either foreign or home-grown, and that he believed it was destined to eclipse all other bacon. This, perhaps, is too optimistic a view, but I am not altogether sure that it is not so."

They Cure Catarrh

Sugden's Tar Pills afford an absolute cure for Catarrh. If five of our dollar boxes do not cure the most severe case of catarrh, when taken according to directions, tell us so and we will refund the whole amount paid. Put up in 25c. and \$1.00 boxes and in 50c. vials. Postpaid to any address at these prices. **THE F. O. MABER COMPANY, P. O. Box 522, Winnipeg, Man.**

When writing, please mention THE FARMER.

THE WESTERN FARMER'S**LIVE STOCK INSURANCE CO.**

D. PRITCHARD, President.

H. S. Paterson, Secretary, P. O. Box 1382.

The best insurance is when risk is greatest. Claims paid for three months ending February 12th, 1901, \$1145.11. Write for particulars. **AGENTS WANTED**

Our Savings

To the Editor.

This letter is to be read only by those who work for wages, or a salary, and is written by one who works for wages.

Every good man has the praiseworthy ambition to provide a competence for his old age, when he is no longer able to work.

Every good man desires to provide for those who are depending on him, should he unfortunately die before he reaches old age.

How can these two objects be gained when we have only our savings to depend on?

I have found the plan which exactly suits me.

It is a contract issued by The Great-West Life Assurance Company, of Winnipeg, Manitoba. It is known as the Collateral Security Policy.

You make a deposit in the Company yearly, or half-yearly if preferred, instead of a deposit in a Bank.

Should you die after you commence, the whole amount of the policy is immediately paid to the family, and contract cancelled. That is, the family of any member is to receive \$1,000, \$2,000 or \$5,000, as the case may be, should death occur.

Should you require to draw on your deposits, as in a Bank, you can do so, only you cannot draw all you have deposited. The amount you are allowed to draw is printed on your contract. Bear in mind contract remains in force, and is still a protection to the family in case of death.

Should you live to make all the deposits agreed upon, you can then withdraw your cash with the accumulated interest, profits and surplus.

You see, therefore, one has all the advantages of a savings account, with a large sum if death occurs, and the money to enjoy should one live to be old.

This contract has all the advantages of an ordinary policy, such as paid up value after three years; month of grace to make deposits; freedom of restrictions as to travel and occupation, etc., etc.

This is but a bare outline of the Collateral Security Policy. Any agent can give you details of cost at your age, amount that can be withdrawn, and cash results when policy matures.

We all know the great importance of Life Insurance as a protection for wife and family, especially if we are cut off in early life. The thousands of members of Friendly Societies is proof that we are anxious to provide for our families. I think if this Collateral Security plan of Insurance was carefully explained to my fellow workers, there would be a large proportion of them who would avail themselves of the chance to kill two birds with one stone—that is, provide for wife and children if death occurred; and if not, to provide for the old man and the old woman when they got old and feeble.

A WORKMAN.

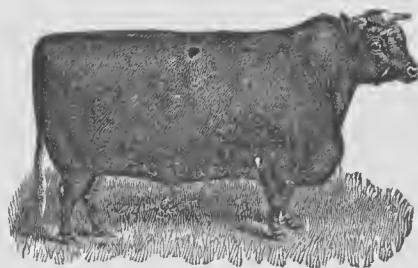
The Great-West Life thanks "A Workman" for his words of commendation. If you are interested, ask one of their agents or write to the Head Office, Winnipeg, for particulars.

MARKET SALES.

My next series of market sales will commence at Indian Head, Oct. 3rd, day after day, Wolseley, Grenfell, Whitewood, Wapella. Parties intending to attend these sales, see posters. I can place a carload of horses at any of the above places. Parties having such should correspond with

Wm. Dixon, Auctioneer, Grenfell, Alta.

When writing, please mention THE FARMER.

Marchmont Stock Farm.**Scotch-bred SHORTHORNS**

The first, the best and largest herd of modern Shorthorns in Western Canada. Forty head imported from Scotland or from imported dams.

Head of the Herd:

PRINCE ALPINE (imp.) by Financierator and of the great Glen Ythan trike, and BARRISTER (imp.) by Prince Victor, a Sittytown Secret.

5 YOUNG BULLS FOR SALE FROM 10 TO 17 MONTHS, AND OTHERS YOUNGER.

7 miles north of Winnipeg.
Telephone No. 1004 B.

W. S. LISTER, Middlechurch P. O.

Prairie Home Stock Farm.

CLYDESDALES SHORTHORNS SHROPSHIRE
BERKSHIRES YORKSHIRES

Shorthorn herd headed by Judge, imp. Juhilee and Ribbon's Choice. Ayrshires of the best quality, herd headed by Surprise of Burnside, Oak Lodge Mighty 7th and a large number of high-class sows represent the approved bacon type of Yorkshires. The Berkshire boar, Victor (Teasdale), sweepstakes at Brandon and Winnipeg, 1900, and 30 sows of faultless conformation and superior breeding, make up the Berkshire herd. Farm one mile from the station. Visitors welcome. Prices and quality right.

THOS. GREENWAY, Proprietor. JAS. YULE, Manager, CRYSTAL CITY.

PLAIN VIEW STOCK FARM.

Portage la Prairie, Man.

**F. W. BROWN, Proprietor.**

Importer and breeder of high-class Shorthorns, Cotswolds, Berkshires, Toulouse Geese, B.P. Rocks. I usually have some of the best for sale in young stock. Spring pigs fit for shipping, and more coming. B. P. Rock eggs. Order young stock now and save freight. Visitors always welcome, and met at the train when notified, and returned there.



PURVES THOMSON,
PILOT MOUND, MAN.

Choice bred Shorthorns and registered Clydesdales. One yearling stallion and some choice mares and fillies for sale. One imported yearling bull, also young bulls sired by Caithness, and a few good show heifers, cows and heifer calves for sale, from Caithness.

**Live Stock Labels**

Send for circular and price list.

R. W. JAMES,
Bowmanville, Ont.

**DUAL PURPOSE SHORTHORNS**

Herd of 37 pure-bred females, thick fleshed, good milkers and regular breeders, headed by Pomeroy Favorite, 34273, second yearling, open class, Winnipeg; sweepstakes Brandon, 1900, Manitoba-bred. One yearling Bull and 11 Bull Calves for sale.

W. G. STYLES, Rosser, Man.

PIONEER HERD OF SHORTHORNS

I have been breeding Shorthorn Cattle right here for over a quarter of a century. I breed my own Show Cattle, and last year had at the Winnipeg Industrial the Gold Medal Herd. First for Bull and two of his get, and first for Cow and two of her progeny. I usually have stuff for sale and am always pleased to show it.

WALTER LYNCH, Westbourne, Man.

LAKE SIDE STOCK FARM.

Large English Berkshires

And Shorthorn Cattle.

One aged bull and two bull calves, roan and red. A few fine October pigs at \$8 each. Orders booked for March and April litters, pairs not akin, \$15, from sows prize-winners wherever shown. Satisfaction guaranteed. Correspondence solicited.

JAMES M. EWENS, Minnedosa P.O., Man.

TURTLE MOUNTAIN STUD OF CLYDESDALES.

Imp. and Home-bred Stallions for Sale.

Two, three and four-year-old Colts, sired by such noted stallions as "Prince of Wales (678)" "Darnley (222)" "Belted Knight (1395)" "Stanley Prince (6315)" "Prince Patrick (8933)" "Macgregor (1487)".

These horses are of the finest quality, good action, good large flat bone, the best hoofs. Some of them prize winners in the old country, and all of them large. For further particulars apply to

J. C. McLEOD, Manager, Ninga, Man.

Yearling Colts by Patrick and Macgregor for sale.

Oak Lodge Yorkshires

ARE THE CORRECT TYPE TO BRING THE GREATEST PROFIT.

We breed our winners, and we win more prizes than all other herds combined at Toronto, London, and other large shows. Sweepstakes in hacon classes over all other breeds in dressed carcass competition, also on foot, for two years in succession. Championship carcass in hacon class at Chicago, 1900. First-prize herd at Toronto Industrial for nine years. Write for prices.

Brethour & Saunders, Burford, Ont.

FARMS AND STOCK

10,000 acres of choice mixed farming lands for sale. One section for \$3,000. Land from \$3 to \$10 per acre, wild and improved. Worthy of inspection.

TERMS EASY.

H. R. KEYES,

Keyes, Man.

HILL GROVE SWINE HERD OF IMPROVED CHESTER WHITES.

Young boars fit for fall service. Sows kept and bred to Imported boar.

A. E. Thompson, Prop., Hannah, N.D., U.S. (Canadian address: Snowflake, Man.)

When writing, please mention The Nor'-West Farmer.

The Mormons in Southern Alberta.

An Account of a Visit to Cardston, Magrath and Stirling, by The Farmer's Own Representative.

Among the Mormons! It was late in the afternoon of a day in June—a day when the heavens were sagging with a shroud of Alberta clouds and the rain fell in steady downpour—that we found ourselves in Cardston. The trip of fifty miles from Lethbridge to Spring Coulee over the "narrow gauge"—the funny little narrow gauge with its pony engine and its half-grown cars—and the drive of fifteen miles by fast stage had taken many hours, but it was now over and we were at last at the Mormon metropolis—the Canadian Salt Lake City.

The fact of the existence in Southern Alberta of a Colony of the Church of Latter Day Saints (commonly known as Mormons) is one of which, no doubt, all of our readers are cognizant; yet very little of a definite nature has ever been written about this settlement. What sort of people are they? How large is their colony? How long have they been in Southern Alberta? What are their commercial, social or religious characteristics? These are all questions to which a good many people might find it difficult to give very definite answers.

In the first place we would say that any picturesque ideas which the traveller might have cherished before visiting the Mormons will at once dissipate when brought face to face with realities. No matter how different from others the Mormon in the abstract may have seemed, the Mormon in the concrete, the real live article, looks and acts for all the world like any of his neighbors.

THE CARDSTON COLONY.

The founding of the Mormon colony at Cardston dates back into the eighties. Rumors of the latent wealth of the "great lone land" to the north had been making their way southward until in 1886 the Mormon church in Utah sent out a party headed by C. O. Card to prospect Alberta with a view to establishing a colony. The outcome of the expedition was the selection of the site of the present Cardston settlement. Ever since 1887 colonization has progressed. How wise was that first choice the unfolding of the years has shown. Sure it is that very few prettier locations for a town could have been chosen than that occupied by Cardston. The winding valley with its noisy mountain-born creek and setting of trees, the leagues of rolling green stretching themselves away on all sides, and beyond to the west some twenty-five miles distant the spectral Rockies—the fortresses, one might imagine, of the gods of strength—their elopes and cliffs and crags wrought out in all the shades of slate and grey, and running up into a line of snow white peaks which serrate the azure of the walls of heaven—surely the scene could not but appeal to any lover of the grand or beautiful.

But there was more than scenic beauty to commend the new land. The great grazing advantages which characterize the whole of Southern Alberta have now no need to be any longer advertised. The immense bands of horses and cattle which have made their owners rich have demonstrated in a most happy way its resources as a grazing ground. The soil at Cardston is, however, darker, and apparently contains more humus than those soils which occur further east, and as the traveller approaches the mountains the vegetation becomes of a coarser and ranker nature, and the average precipitation increases. The numerous streams and creeks which flow out of the mountain water the land well. Cardston is a town of about 700 or 800 people, and is surrounded by a well-settled farming community.

MAGRATH AND STIRLING.

What has so far been said has had more special reference to the Cardston district. Now a word or two about the new Mormon settlements of Magrath and Stirling. As readers of this paper well know, the Canadian Northwest Irrigation Co., two years ago, commenced the work of constructing their great irrigation system south of Lethbridge, an irrigation system, by the way, by far the greatest yet developed in the Dominion of Canada, and one of the largest in America. By an arrangement with the Mormon church in Utah, a good deal of construction work on the canal was done by a lot of new Mormon colonists and the settlements of Magrath and Stirling were started. Magrath is about midway between Cardston and Lethbridge, and about fifteen miles east of it is Stirling. Both points are on the new St. Mary's River Railway and command the advantages of the irrigation system referred to. Although the settlements are only one year old, Magrath has now a population of 500 and Stirling over 400 souls, and a very satisfactory showing is being made. At Magrath this year there is about 2,000 acres under crop, and at Stirling a smaller area.

THE MORMONS AS FARMERS.

At Cardston mixed farming has been practiced, combined with a good deal of stock-raising. Until last year the nearest railway connection was with the C. P. R. at Lethbridge or Macleod, and of course the long haul made grain-growing unprofitable. This year, however, a good deal larger area has been sown, and the amount of public pasture is getting very limited. Just to what extent grain-growing at Cardston may be made profitable remains largely to be seen. A good deal of the land west of the town is so broken and the altitude creeps up so closely to the frost line that

it is doubtful if very extensive growing of cereals will ever be practiced. Dairying should, however, prove very profitable, and will likely be followed very much more in the future than heretofore. Going eastward, however, the land is much more level, and the altitude rapidly falls off. At Magrath and Stirling, with their irrigation advantages to fall back upon in dry seasons, the case for a very profitable system of intensive farming seems good.

One feature of farm practice which we found here to be quite different from that prevailing in most other parts of the west is that of sowing upon the first year's breaking. No doubt the straitened circumstances incident to commencement in a new country has led to this practice, but, whatever the cause, the results certainly are better than might be expected from similar work done in Manitoba or Eastern Assiniboia. Last year at Magrath 400 acres were sown to wheat and oats in this way, and an average crop of 25 bushels to the acre was obtained. The crops at these points were looking very well indeed at the time of our visit. At Magrath about 125 acres were under fall wheat, and this crop was looking magnificent. Some alfalfa and red and white clover had been sown and was looking well. At Stirling we were shown some of these clovers which had come through the winter without any sign of killing, but it is as yet a little premature to make any definite statements as to their permanent adaptability. Brome grass shows itself as good a cropper here as elsewhere. At both Magrath and Stirling a large acreage has this year been planted to potatoes and onions. One man at the latter point has four acres of onions. A good many small plots of sugar beets have been sown, and the farmers here are quite hopeful over the idea of the probable establishment of a beet sugar factory. Should beet growing prove the success hoped for, development is likely to follow which it is difficult to forecast. We were told that last year at Stirling two men raised 250 lbs. of California beans, a southern crop, and tomatoes were also ripened.

the farmers live in the town, and in the outlying settlements a good many smaller villages have been started. The homestead laws have previously interfered to some extent with this plan of life. Mountain View, Leavitt, Caldwell, Aetna, Taylorville and Kimball are all small villages laid out according to this scheme. At Magrath and Stirling all the farmers but about half a dozen live in the towns, some of them having to drive about three miles to their work. Socialistic principles seem to be an inherent part of the Mormon faith and practice. In fact, it is debatable if this feature of their religion has not more than any other been the influence which has brought about the remarkable growth of the organization which with only 70 years of history now numbers in the United States about 200,000. Mormon life is pre-eminently organized church life. There are at present about 3,000 or over of Mormons in Southern Alberta. Each village (or ward) has its bishop, and the ten wards constitute the "Alberta stake," which is likewise presided over by a presidency of three. This division is again ruled over by the heads of the church in Utah. In the various wards tithing offices are built in connection with the churches, and each good Mormon brings his tenth to help the work of the church and to assist his less fortunate fellow along the road to earthly prosperity.

Care of the Hands.

When we remember that the hand performs more delicate offices than nearly any other member of our body, it behooves us to attach importance to the care of it, says an exchange. It touches many objects through which the germs of infectious diseases may be conveyed. Besides, neglect of the nails and hands is more quickly observed than we suspect, and persons draw conclusions from our disadvantage. Polishing the nails and manuring the hands daily may serve for



FARM HOUSE OF JOHN A. SNELL, ONE MILE FROM YORKTON, ASSA.

The attention which has been given by a few of the farmers at these new settlements to tree-planting and the improvement of their homes pleased us very much. At Stirling, Mr. Grant, who is quite an enthusiast, has laid out his lot in a beautiful way and has about 1,000 two-year-old trees of the ash-leaved maple, spruce, native ash, Russian and Lombardy poplar and Russian willow. With these sorts no difficulty was experienced last winter. The caragana was also making a splendid showing. Very many more trees and shrubs were started this year from seed. Gooseberries, currants and strawberries were all doing well. We were very much interested in Mr. Grant's enterprise, and trust that our readers may at some future time be treated to the benefit of his further experience. We noted also that a number of apple trees which had been set out in these villages had lived through last winter with scarcely any killing. Mr. Merrill, of Magrath, who is also an enthusiastic grower of trees, had apple trees in bloom this year and had also wintered plum trees fairly successfully. Of course, while these facts in connection with the growing of the larger fruit trees have so far been encouraging, a good deal has as yet to be demonstrated as to their permanent usefulness or hardness. Manitobans have learned to make haste slowly along such lines as these, and a tendency to rush into apple and plum tree planting without a fuller knowledge would be unwise; still the successes which have so far been scored are encouraging. Mr. Merrill expects to plant ten acres with trees and shrubs.

SOCIAL AND RELIGIOUS.

One of the most striking features about the Mormons is their communistic system of settlement. The Mormon ideal socially is that each farmer have his house and lot in town. At Cardston a large number of

the pastime of idle people, but the busy woman will find the few simple rules of great benefit.

Not only should the hands be kept clean, but the nails should be equally as well cared for. It does not require a manicure set for its success. Two things are essential, the first of which is to thoroughly soap the ends of the fingers and nails when washing the hands. If this simple rule is carried out it will not be necessary to cleanse the nails with a knife or any instrument which bruises the tender skin and tears the flesh and forms a roughness. The second rule is to press back the skin at the edge of the nail, using the strong thumb nail instead of the manicure implement. The skin should be firmly cleared from the nail until it presents an even rim about it and shows at the base of the nail the whitish half moon. This will cure hang-nails and soreness at the finger ends, and will help wonderfully in keeping the hands clean.

An excellent disinfectant and purifier to use is powdered borax; it softens the water as nothing else can, and keeps the skin soft and smooth, besides there is no other cleansing agent equal to it. All the actresses know its value in keeping the skin in good condition, especially where the hands have to be washed often, and the lotions sold by manicure parties are a solution of powdered borax and extract of sweet violets to perfume. It is very good to put in the water when treating the nails. It softens them and makes them amenable to treatment, but to keep away infection there is nothing can take its place as it is not poisonous or dangerous, but perfectly safe.

Quiet conscience is quiet sleep.

Wealth is not his that has it, but his that enjoys it.

The Brandon Binder Twine Co., LIMITED.

The work of organization for the Brandon Binder Twine Co. is being pushed forward vigorously. As a result of the policy pursued by the promoters in disposing of the shares so that five is the largest number that can be held by any one shareholder, the stock is scattered all over the province and the Northwest Territories. An encouraging feature in connection with the stock list is the great number of applications for stock that come in through the mail. Many wide-awake people are taking the full limit of shares (which is five to any one individual), also getting other members of the family to take a like amount.

Over a hundred and fifty post offices are represented on the stock lists. At a meeting of the directors held on Monday evening by-laws were adopted and a resolution passed making a call of ten per cent. on the stock subscribed. The call is payable on or before October 1st. A committee was appointed to make arrangements with the city council for an exemption from taxation for fifteen years on the factory, on which it is expected operations will commence in about three weeks. The solicitor was instructed to apply for the charter.

It is a well known fact that the farmers pay an immense amount of money to middle men to supply them with their wants, which in this case is done away with; we will give the shareholder the middleman's profits (or a part of it) of one cent per pound on what twine he uses, provided, of course, that he secures the directors against loss for what he buys.

Everybody knows that twine users are paying a long price for binder twine in this country. Secure your share of this profit by taking a share in the Brandon Binder Twine Co., Limited, which you can do by cutting

out stock blank in The Nor'-West Farmer, August 20th, at page 438, or write to any officer of the company at Brandon.

This will enable us to get the company together with the least possible expense and save the cost of sending men to solicit your share.

Some people are afraid of farmers' companies because some creamery or elevator has not been up to their expectations. If one man is docked 10 bushels and another five there certainly was a chance for a kick, but in the twine business the directors fix the price and every shareholder will pay the same price, and as we will only make one grade of twine, and that the best, all will be treated alike. You will get 50 pounds of clean twine to the bundle without lashings or canvas and not 47 or 48 pounds, soaked with oil which is only worth 8c. per gallon, or 3c. per pound. As to the paying quality of the business, the reading public very well know it is one of the best in the world. We could easily sell the balance of shares to capitalists, but by selling in small blocks we make our market sure and without the cost of middle men. If the agricultural implement companies could sell their product direct to the farmer they could do so at a much less price, and have larger profits for themselves at the end of the year.

The company are now located in their new office in the Macdonald block, over Smith & Burton's store, where anyone wishing to purchase stock or get any information in regard to the company are requested to call, or write V. E. Tanner, Brandon, Man. [Adv't.]

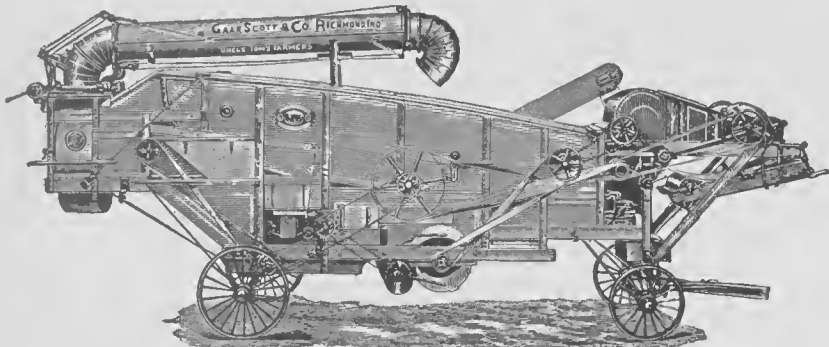
After ironing put all linen in the sun or near the stove to air and stiffen. You will iron much better if you damp things after drying, roll lightly, and lay aside for several hours.

GAAR-SCOTT 3-WAY CRANK Separator

WITH

Uncle Tom Wind Stacker and Gaar-Scott Band Cutter and Feeder.

The most perfect combination of Threshing Outfit in the World.

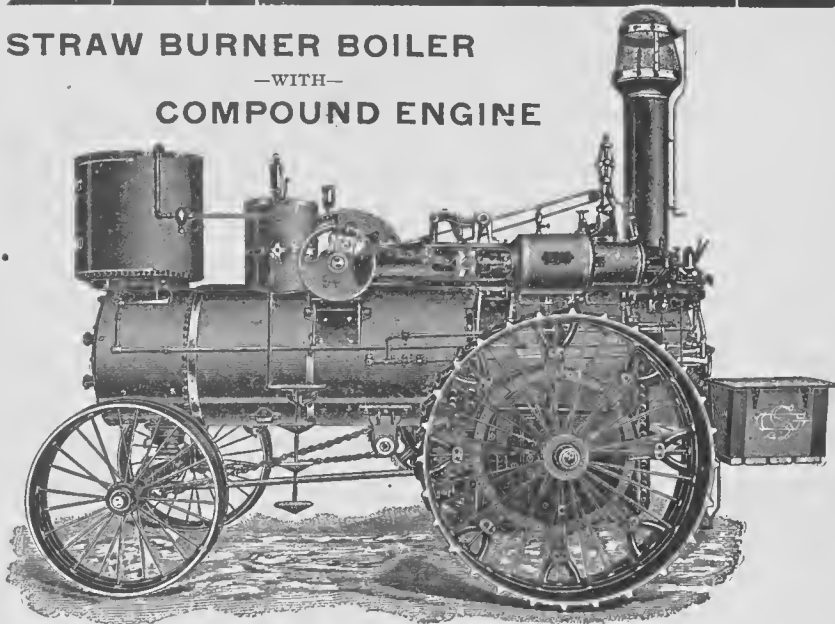


SEE SAMPLES

See what Manitoba users of above outfits have to say of them before you place your order for 1901.

GAAR, SCOTT & CO., WINNIPEG, MAN.

Return-Flue-Fire-Box

STRAW BURNER BOILER
—WITH—
COMPOUND ENGINE

Transfer Agents, JOHNSTON & STEWART

AMONG THE BREEDERS.

Alex. D. Gamley, Balgay Farm, Brandon, Man., reports a lot of good Leicester sheep for sale this fall. He intends to dispose of 75 or 100 and it is a good chance for those wishing to get a start with sheep.

J. G. Washington, Ninga, Man., reports the sale to Hon. Thos. Greenway of Ninga Jubilee Queen, first at Winnipeg in the 3-year-old Shorthorn class, also Lily Lee, a 2-year-old of choice breeding to Wm. Henderson, Wakopa, Man.

The annual sale of stock of Henry Duding, the noted Lincolnshire breeder, was a success so far as the cattle were concerned. One cow made \$1,040. The sheep had fewer purchasers and compared with previous years made low prices, the best ram making only \$140.

We regret having to report that the fine barn of W. E. Baldwin, at Manitou, has been burned down. It was set on fire by lightning. A large new piggy was also burned. With the help of willing neighbors the stock was saved, but a large quantity of valuable feed and other effects were destroyed. Mr. Baldwin will rebuild immediately.

Princess Patricia, whose photo appears in this issue, is a brood mare of exceptional quality. Her two-year-old stallion colt, Prince Patricia, was first in his class and sweepstakes gold medal at Ottawa last year. Her owner, John A. Turner, has recently sold four very good young registered mares to Jas. Gilchrist, Shellmouth, Man., some of them prize winners, which should be a good foundation for a stud in that neighborhood, as they are well bred, showing lots of quality and of the blocky low set type.

A. B. Potter, Montgomery, reports that his stock got home from the summer fairs in good shape. He had good sales at the fairs for swine, in fact, all he could spare were sold. Among his late sales were one Berkshire, one Yorkshire boar to J. K. McInnis, Regina; one Berkshire sow to R. McKell, Regina; two Berkshire sows to L. Alexander, Regina; one Berkshire boar to W. A. Lamont, Whitewood; one Berkshire boar to K. McKenzie, Rapid City, Man.; one Yorkshire boar each to G. Cleaver, Minnedosa and W. Dixon, Hillesden, Assa. He has still some good young Holstein bulls for sale.

At Millet, Alta., a Farmer representative recently called upon B. A. Van Meter, who has a small herd of Polled Angus. Mr. Van Meter has been using Polled Angus bulls upon his grade herd for some years, but a little over two years ago purchased from J. Traquair, Welwyn, the Winnipeg sweepstakes bull, Athelstane, and from Hon. W. Clifford, Austin, a couple of young cows, Black Bess and Rose of Austin, thus securing the nucleus of a pure bred herd. Although he has not made any new purchases since that time, the little herd is increasing very fast. Black Bess, although not yet four years old, is mother and grandmother of four heifer calves, all on the farm now. We were shown some well made calves and a yearling bull, General Buller, which, though a little on the small size, is one with pretty good lines top and bottom. We were not able to see the herd bull, Athelstane, he being away from home, but the owner speaks very highly of the satisfaction he is giving. Mr. Van Meter was a breeder of Polled Angus in Kansas before coming to Alberta, so we will expect to see him soon make a good showing in his present location.

Jos. Lawrence & Sons, Clearwater, write: "The stock that we sent last spring to the Northwest Territories has done so well that we are constantly getting repeat orders to be filled in March, 1902. We have already orders for about 30 head. Sam Briggs, Wood Mountain, writes: 'The 7 head I had from you this spring are beauties, every one of them. I want 7 to 10 head more for next spring.' Mr. Leseuer, Morley, says the bulls he had from us are doing extra well, he also wants 3 or 4 more. Wm. Brown, Gleichen, says: 'The bulls we have been getting from you are improving every year.' He also wants two more. Mr. Whealan, De Winton, says: 'The bull I had from you is an extra good one. I want two of your best heifers.' Mr. Hutchinson, Ponoka, says his bull more than pleases him and orders two heifers, which we could not supply him last spring. Mr. Home, Rosser, says his bull is doing extra well and Mr. Horne, Fargo, N.D., says 'My bull is the best round here, I will do all I can to get sales for you for next year.' Alex. Muuro, Whitewood, says his two bulls are doing extra well and also orders two heifers that we could not give him this year. Mr. Brydon, Killarney, and Mr. Torrance say the same, in fact, we have heard in the same strain from everyone who got the 36 head we sold last spring. Besides supplying all our last year's customers we have promised to run a car of stock into the Dauphin country, so we have our hands full."

Dairymen, Take Notice!

Calf meals and cream equivalents are not necessary for calves. All the bone, muscle, nerve and flesh are in the skim milk, and one ton and a quarter of skim milk can be made equal to new or whole milk for calves by adding fifty cents worth of Herbageum, while the cost with any calf meal or cream equivalent is about two dollars, and the general results are not as good as with Herbageum.

It is also worthy of note that fresh whey and Herbageum for calves or pigs give excellent results, and that for general use with all classes of animals Herbageum is of real value because it keeps the whole system right. Where it is regularly used there will be no lice on calves, colts or poultry, nor will there be ticks on sheep or lambs.

Do not be deceived by those offering calf meals or cream equivalents, but write The Beaver Mfg. Co., of Galt, Ontario, Canada, for full information. Herbageum is for sale in almost every village in Canada. Enquire for it, but as several inferior imitations have been placed on the market, be careful in buying that the word "Herbageum" (registered) is on the bag, also The Beaver Mfg. Co., Galt, as they are the sole manufacturers.—t.f.

Herbageum is manufactured by the Beaver Mfg. Co., Galt, Ont., and can be purchased in nearly every town and village in Canada.

The Ontario Veterinary College, Ltd.

Temperance St., Toronto, Can.
Affiliated with the University of Toronto.

Patrons—Gov. General of Canada and Lieut. Governor of Ontario. The most successful Veterinary Institution in America. All Experienced Teachers. Fee, \$65 per session. Session begins Oct. 16. Apply to Principal, ANDREW SMITH, F.R.C.V.S., Toronto, Canada.

J. A. S. MACMILLAN,

Live Stock Agent and Importer, Brandon.

Having a large connection amongst many of the foremost breeders in Great Britain, I guarantee to supply pure-bred Horses, Cattle, Sheep and Pigs of any British breeds for exhibition or breeding purposes on the most favorable terms. Satisfaction guaranteed. Prices on application. P.O. Box 483.

Russian Wolf Hounds For Sale.

I have several very fine Russian Wolf Hounds which are individually great killers and away ahead of any other dog for killing prairie or timber wolves. All my stock is from the best imported dogs brought to America.

TOLSTI stands 33 inches high, very deep chest and very swift. At stud, fee \$20.00.

TORNIA stands 31½ inches high and a splendid tackler. At stud, \$10.00.

Have several very fine Puppies for sale.

Write me for particulars.

J. W. FLEMING,

P.O. Box 7. BRANDON, MAN.

Every Farmer

In Manitoba and N.W.T.

Do you want the best WEED CUTTER that ever came into the country? If you do, order from B. Bell & Son, St. George, Ont., or Joseph Wylie, Lumsden, Assa. This Weed Cutter contains 13 small shears or cutters, half of which cut to the left, the other half to the right. It cleans the land of couch grass and all weeds at one stroke, leaving a fine seed bed. The inventor of this grand implement has the third crop of wheat on land since plowed that will yield 35 bushels to the acre. Order one of these Weed Cutters; every prosperous farmer will have one. Has been used two years and pronounced a success by every one who has seen it work. Will put stubble land in good condition for crop without plowing. J. Wylie, the inventor, has a very heavy crop of wheat on breaking torn to pieces by this new Weed Cutter. You want one and will buy when you see it work. Address—

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As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on veterinary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and symptoms clearly but briefly set forth.

ANSWERS TO QUESTIONS.

Pin Worms.

J. J. R., Wetaskiwin, Alta.: "Have a mare 8 years old which seems badly out of condition. She had a colt this spring which did well till it was about two months old, then it died. When standing in stable she stamps her feet as if bothered with worms, but eats heartily. I think both mare and colt had pin worms. Would they have caused the poor condition of the mare and the death of the colt? The mare don't seem to pick up since the colt died. Will wood ashes in her oats kill worms, if not, what will?"

Answer.—These worms inhabit the parts of the intestine farthest from the mouth, consequently medicines that are given in the feed are largely diluted and by the time they reach their intended victims are powerless to destroy them. It is better therefore in dealing with this species of worm, to inject the remedy into the intestine from behind. Any of the ordinary vermifuges may be used, decoctions of aloes, or of quassia chips are usually effective. Tobacco water is poisonous and must be used with care. A quart of an ounce of aloes dissolved in a quart of boiling water, cooled to a proper temperature and injected is a favorite remedy. Whatever drug is selected, the dose should be repeated daily for a week or more, the best time to give it is when the horse has come in from work and the bowels are comparatively empty.

Breeding at Two Years Old.

Breeder, Brandon, Man.: "Should a mare at two years old be served by a stallion? I contend that this is too early an age. Is such the case?"

Answer.—At the age of two years a mare is, or ought to be, growing rapidly. Her bones are still partly cartilaginous or gristly, and a change is actively going on in which this gristly matter is being replaced by true bone. Permanent teeth are forming in the alveoli to replace the milk teeth at the proper time, and in all parts of the body the tissues are busy adding the materials required in building up the adult body. Normal growth can only take place if the materials are provided, and this is limited in amount not only by the quantity and quality of the food consumed, but also by the capacity of the digestive organs to extract the nutriment from it. Growth, then, depends largely on the owner of the animal, who has to provide suitable and abundant food, and secondarily on the constitution of the animal in question. A certain amount of the food is used up in repairing the loss from merely living, the wear and tear of the body, as it were, and it is only after this has been done that the balance of the food, if any, can be applied to the growth of the animal. If in addition to these demands of the body for nutriment there is added the necessity of providing for the growth of offspring, there is some danger of the balance between demand and supply being upset and serious damage may result. The mare bred at two years old may produce a fine large vigorous foal, but herself receive a check in her growth from which she never recovers and does not attain the size she otherwise would. On the other hand, while the mare may show no appreciable damage from the early breeding, the colt may be small, weak, or lacking in constitutional stamina. The experience of breeders goes to show that early breeding is a mistake, as even when no immediate damage is apparent, the result is seen in subsequent generations in unsoundness and lack of constitution.

Swollen Leg.

P. C. T., Logberg, Assa.: "A four-year-old mare, broken last spring, has the off hind leg swollen from the hock down to the hoof. It has been in this condition nearly three weeks and the injury is supposed to have been caused by kicking the stall post. The leg was blistered when the swelling first appeared, but this only made matters worse. Since then the leg has been bathed with cold water every night. The mare is working every day, either on mow or rake. The swelling goes down with work, but raises during the night. Would it better to let her run? Was the blistering an unwise thing to do? Kindly advise in your columns."

Answer.—The blistering has done the leg harm, and has made the swelling more difficult to remove. Blisters should not be applied to recent injuries. Your best plan now

is to turn the mare out on the grass for a run of two or three weeks. The swelling will most likely disappear, but should any remain it should be treated by cold water bathing and hand rubbing with some mild liniment containing iodine.

Coronitis.

A Subscriber, Bagot, Man.: "A number of cattle round here have had sore feet. The foot starts to swell just above the hoof, then after a few days a scab comes on immediately above the hoof, about the size and shape of a twenty-five cent piece. This scab loosens and comes off, leaving a dry hole from half an inch to an inch deep, never seems to run of any account. Takes about six weeks to heal up, seems very painful and brings the animal down very thin. Would be pleased to have information through your valuable paper as to name, cause and treatment."

Answer.—This may be due to one of several causes, infection of the part with low organisms, bruises, irritation from alkaline mud, poisonous plants, etc. When noticed lame the cattle should be kept in and fed in the stable or yard. Bad cases should be poulticed until the slough separates. The part can then be dressed by filling the wound with powdered boracic acid, and protecting by a cotton bandage with a wad of oakum or tow over the sore.

Lacteal Fistula.

D. C. Lenoir, Wetaskiwin, Alta.: "I have a cow with two holes to a teat, one at the natural place and one on the side. Can you give me advice what to do to shut the wrong one?"

Answer.—The unnatural opening into the teat is called a fistula and it will be difficult if not impossible to close it while the cow is milking, but comparatively easy when she is dry. Take a sharp, small bladed knife and pare away the edges of the opening through the entire thickness of the skin, then dust it with iodoform, and draw it together with one or two stitches, as may be needed. A little collodion painted over it will exclude the air and make a protective covering while it is healing. You would probably have to throw the cow down and tie her securely in order to do this.

Swollen Glands.

Subscriber, Plumas: "Some of our sheep have a soft swelling under lower jaw at times, will go away and re-appear. The sheep look gaunt and dull during the time of the swelling. Were troubled more in the winter. Kindly give us cause and cure."

Answer.—The cause of this swelling must be looked for in some of the conditions under which the sheep are kept, food, water, etc. The glands of the throat are apt to become swollen as a result of cold, improper food, or impure water and it is impossible at this distance to give a definite answer.

Diabetes.

W. H. S., Morris, Man.: "We have a horse 6 years old, bought him last spring, has never done well since we got him, had to lay by a long time last May. We have fed him three gallons of grain per day, with boiled flax several times a week, and sulphate of iron. He eats well. He is constantly passing water when at work. We have also given him baking soda in his water. What can we do for him, as he keeps so very poor?"

Answer.—Your horse appears to be suffering from diabetes, and perhaps is affected by intestinal worms as well. Has he been getting any musty oats or hay during the summer? Musty feed is a common cause of this complaint. You should give him twice a day two drachms of iodide of potassium dissolved in a little water and added to his feed. The druggist will easily make you the solution of such a strength that a tablespoonful will contain the required dose. Feed him well and do not work him hard. As soon as he appears to have got over the trouble in his "waterworks" shown by frequent urination, you should stop administering the iodide, and give a simple tonic such as gentian and iron.

Acute Cellulitis.

Subscriber, Greenridge, Man.: "Horse went off his feed at noon, next day hind leg swelled badly; next day noticed front leg on same side also swollen; in two or three days all his limbs were so swollen he could not get out of stable. He did not have any fever. Commenced to eat hay on the fourth day; fed bran mash, blistered legs, but can't get swelling down; horse is very stiff. What is the trouble?"

Answer.—Give the horse twice daily the following: Iodide of potassium, two drachms; fluid extract of nux vomica, one drachm; water, six ounces. To be given as a drench. The horse should be allowed the run of a loose box at night, and be turned out during the day if the weather is fine. Bathe the legs daily with cold water and afterwards rub them with methylated alcohol.

Rumination Suspended.

H. T., Millett, Alta.: "What is the right treatment for a cow that does not chew her cud, also for a horse that is always groaning and snorting when he drinks? The water will run out of his nose, at other times there will

be a discharge from his nose, he is very thin, but eats well."

Answer.—The treatment for a cow which has stopped chewing the cud depends upon what is the matter with her, as this is not a disease in itself, but only a symptom that something is wrong somewhere. The trouble is usually in the digestive organs, and we may find the animal suffering from indigestion, impaction of the omasum, or constipation. But sometimes rumination ceases because the animal is suffering from some grave constitutional disease, and this is a symptom that is present in nearly every acute disease at some stage or other. So you will understand that it is impossible to give a treatment that will cure this symptom in every case and we can only give a prescription which will do good in the case of indigestion. Carbonate of ammonia, two drachms; nux vomica, one drachm; ginger, half an ounce. To be shaken up in a bottle of water, and given in one dose. Repeat three times daily until cured.

The horse shows symptoms of an internal swelling of the pharynx, perhaps an abscess of the retro-pharyngeal glands, or more likely, a collection of matter in the guttural pouches. This is a condition requiring surgical treatment and you had better take the animal to a veterinary surgeon.

Western Stock at Toronto Fair.

Our information as to the awards at Toronto is still rather fragmentary, but the following is announced: In the Shorthorn class the following prizes were taken by the Prairie Home herd: Bull, 4 years old and upwards, George Bruce, 3rd prize; bull, 2 years old and under 3, Slittytton Hero 7th, 3rd; bull, under 2 years, Ribbon's Choice, 4th; cow, 4 years old and over, Jenny Lind, 3rd; cow, 3 years old and under 4, Village Princess, 3rd; heifer, under 2 years, Bright Light, 5th; heifer, calved before Feb. 1 last, Judge's Heiress, 1. Best three animals, get of one bull, 2nd; bull and four females, under 2 years, 3rd.

In the Thoroughbred class, Dermot, champion of the Thoroughbreds at Winnipeg, was awarded 1st prize in his class.

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The Philosophy of Milk and Cream in the Udder.

All dairymen know that the last part of the milk that comes from a cow's udder when she is milked out is richer in cream than the first milk, says Dr. Galen Wilson, but only a few are able to give a satisfactory explanation why it is so. Some say the cream naturally rises to the surface of the milk in the udder, in the same way that it does when the milk is removed from the cow; that the cavities in the udder, like those in a sponge, are always open, or do not come in contact, so there is nothing to prevent the cream, which is lighter than milk, from rising to the top. The cavities in a sponge are always distended whether full of fluid or empty; but the milk cavities, reservoirs and tubes of the udder are always collapsed and in contact except when kept apart by having milk in them. With this constant inclination of their walls to be in contact it must be evident that a liquid would work its way through them more easily than a solid. It must be remembered that milk is a mixture of liquid and solid matter, as much as a mixture of brine and corn meal would be.

The serum, or liquid part of milk, is water, holding in solution sugar and cheesy matter; and the cream globules are particles of fat in solid condition and sustain the relation to the liquid part of milk that corn meal does to the brine, especially when mixed with a brine just strong enough to incline the meal to float. If it were attempted to pass either of these mixtures of liquid and solid through the milk tubes, the liquids in either case would work along more rapidly than the solids. The meal in one case and the fat globules in the other would meet with impediment from friction with the collapsing walls of the slender tubes, and would fall far behind in the journey and be dripping out in the last running of the liquid.

This is just what happens in the udder to make the last part of a milking richer in cream than the first, and not, as most people suppose, that the cream had arisen in the milk reservoirs while in the udder. The larger the globules of cream the more friction they meet with in moving along the tubes and the more get left behind. It is for this reason that in milk having very large globules, like that of the Jerseys and Guernseys, the difference between the first and last of a milking is greater than when they are smaller, as in the milk of Holstein cows. When a milker sits down to milk a cow, it is an error to believe that all the milk he may get is right at hand in the udder, ready for him to draw. Cows giving large quantities of milk have been slaughtered and every drop of milk gathered up, and the history of such cases is that the largest amount ever found was only a few quarts. Milk is mostly formed during the time of milking, and for best results the cow must be under the best conditions at that time, or the regular quantity and quality of milk will not be obtained. There should be no disturbing noise about of any kind, as of dogs, children or strangers talking, or hammering, or pounding, or anything of the kind out of the ordinary. When a cow becomes accustomed to her environment or surroundings, if they are proper, they should be kept so always.

A strange cow placed in the next stall is apt to cause a shrinkage of milk for the time in both quantity and quality. A cow is a nervous creature, and the more nervous, apparently, the better she is. To get the most and the best milk, all of these conditions must be fulfilled at each milking, and then the very last drop be drawn from her

udder. Good cows, good feed and good care together are the sum and substance of good milk production.

The Model Dairy at the Pan-American.

In the prolonged record of the cows at the Pan-American Model Dairy many contingencies arise that tend to modify the value of the results obtained. Some cows are fresh while others are not; some are not acclimated and some have suffered from the extreme heat of June and July to an unusual degree. A study of the amount of feed consumed shows that it varies considerably. This is due in great measure to the difference in weight of the different animals, as some of the cows are under seven hundred pounds, while others are large enough to furnish material for a barbecue. Instances are noticable wherein one cow consumes more feed and gives more milk than another of the same weight.

Some farmers prefer a small cow, caring nothing for any qualities except milk; others want milk that is rich in butter fat, while still a few others want milking qualities that will produce a large amount of casein, as they value the cow according to the amount of cheese she will produce. Successful farmers study conditions, markets and make their arrangements accordingly. A cow is regarded as a machine that is designed for a special purpose and is treated accordingly.

It is impossible in a printed report to include all the different details that are essential to a thorough understanding of a question that has so many sides; enough, however, is given to interest the general public, proof of which is made manifest every day by the crowds who throng the model dairy and the great numbers who are continually asking questions concerning the favorites whose acquaintance they have made through these reports and the comments thereon that they have read in the papers.

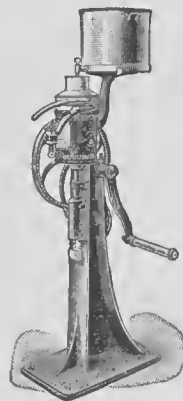
Butter as a Food.

A writer in the Vegetarian has the following: "It will first be well to make clear the difference between butters and other fats. The fats (butters) which are obtained from the secretions of the mammary glands of most animals are materially different in composition from those which occur in the adipose tissue, and it is in this difference chiefly that the superiority of butters over animal fat lies, for the butters that are intended for the tender digestions of the very young are, of course, much more readily acted upon by the pancreatic juice than are the fats obtained from the adipose tissue, and thus more readily assimilated by the system. Furthermore, milk fat, when taken in the form of milk or cream, is already broken into exceedingly fine particles, so that the process of digestion has thus partially been performed; for the digestion of oleaginous matter does not, as in the case of food of an albuminous or carbohydrate nature, consist so much in its decomposition by the gastric juice and the pepsins contained therein, but chiefly in its emulsification and its occlusion by the villi in the small intestines. Fats are also partly saponified by the pancreatic juice, and here again butter fat is much superior to any other, as being far more easily decomposed. So it is evident that, partly owing to its peculiar physical condition, and partly because its chemical constitution renders it more easy of digestion than any other fat, where fat is required to retain the temperature of the body—as it is in considerable quantity in all the temperate climates—butter fat holds, par excellence, the first place.

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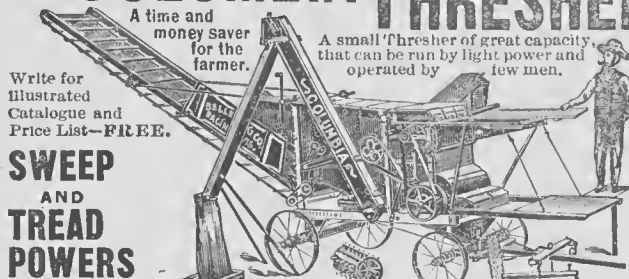
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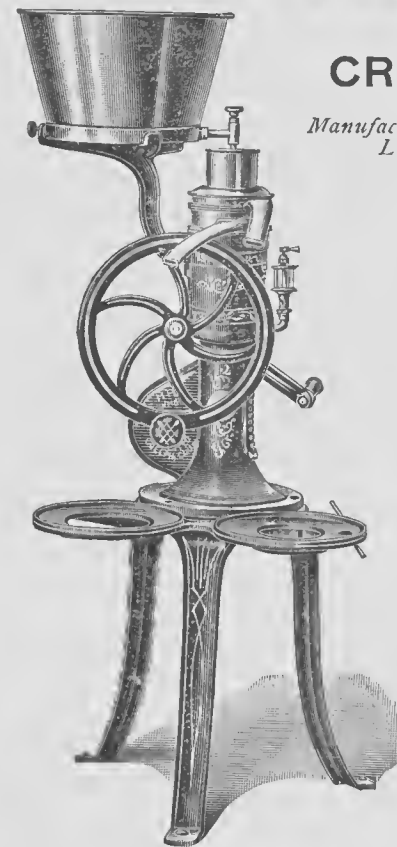
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To Make Small Cheese.

The following directions for making cheese in a small way for family use are given by a writer in the Rural New Yorker:

We will assume the quantity of milk to be 500 pounds of four-per-cent. milk, and if more or less, the amount of rennet, salt, etc., may be changed accordingly. The night's milk should be kept at a temperature of 65 degrees Fahrenheit, after being exposed to the air after milking. In the morning mix the two milkings together in a vat or tub not exceeding 20 inches deep; 15 inches would be better. The curd would cook more thoroughly, with less danger of packing in the bottom. A very simple and effective way of heating will be to use two small cans seven inches in diameter, and high enough to come above the milk. Fill these cans with hot water, set them in the milk, moving the cans and agitating the milk until warmed to 84 degrees, when the cans should be removed. If one desires colored cheese then add one-half ounce of some standard cheese color; mixed with a half pint of water; mix thoroughly. Provide yourself also with 1½ ounces of rennet extract. Put the extract into a half pint of cool water; do not use warm water or keep it where it is warm, and add to this milk, stirring for two minutes. In about 25 minutes this coagulated mass will be ready to cut. Put the finger gently into the curd, and when it breaks clean over the finger it is ready. If no cheese knife is at hand previously provide yourself with a piece of galvanized iron woven wire with a half inch mesh, about six inches by 15 inches; draw it through the mass lengthwise, crosswise and from top to bottom. Of course it is a crude way of cutting, but will serve the purpose of breaking the mass and starting the whey. Keep the mass stirred so each particle will remain independent of another. In 10 minutes the heating cans should be set in again, filled with hot water. Keep them moving as well as the curd to prevent overheating any portion of it. When the thermometer registers 98 degrees take out the cans and keep the mass stirred until the curd particles do not readily adhere; then stir occasionally until — well, let's see. This point is not so easily told. The old, old way was to take off the whey when the curd squeaked between the teeth—that's not bad. I should of course rather depend upon the feeling and by smelling, but the beginners would better use the first rule mentioned aided by the feeling. Take a handful of curd, squeeze it hard, let go. If it has an elastic feeling showing it to be well dried out, then take off the whey.

Keep the curd well stirred until it is free from moisture and cool, which will require about half an hour. It may be more convenient after removing the whey to take the curd into some other receptacle, where the moisture will drain out more easily and quickly, either by a slanting bottom or a rack with a cloth over it through which the moisture can drip. One pound of clean salt will be sufficient; add and thoroughly mix, and allow to remain before pressing for 15 minutes. Two hoops 11 inches in diameter and 12 inches deep, or one hoop 14 inches in diameter and 14 inches deep, will be needed, or if small 12-pound cheeses are wanted, get four seven-inch hoops, one foot deep. The amount of cheese produced from the milk will depend upon its fat contents. One can safely figure 2.65 pounds curd cheese to each pound fat in the milk, if the milk contains anywhere from 3½ to 4½ per cent. butter fat. Make a cheese bandage to fit, and long enough to project past each end one inch or even two inches; it can be cut off. The bandage may be placed in before putting in the curd and turned over the top edge of the hoop, to hold it while filling; use a round piece of cotton cloth at each end of the cheese. I would not advise any cheap uncertain method of pressing; a 1½ inch screw set in a frame with means of turning, or send to a dairy supply house and get a press. If sufficient pressure is not

applied the rind will not form and the whole job will be a failure.

After pressing an hour, take out, adjust the bandage smooth and cover the edges nicely, put on cap cloths of same material, with the cotton press cloths on top, and at bottom the same; put on a closely fitting follower, put to press again, and keep it there until the following day. Then take it out and cure in a room from 60 to 65 degrees for three weeks. If you have not slipped a cog somewhere the cheese will be presentable and eatable. From an economic standpoint, however, the job will be a failure. An equal amount of cheese can be purchased much cheaper of some reliable manufacturer or dealer, quality guaranteed.

Bicycle vs. Cow.

An Irish farmer went into an ironmonger's shop to buy a scythe. After serving him, the shopman asked him if he would buy a bicycle.

"What is that?" queried the Irishman.

"It's a machine to ride about the town on."

"And shure, what might the price of it be?"

"Fifteen pounds."

"I'd sooner see fifteen pounds in a cow."

"But what a fool you would look like riding around the town on the back of a cow."

"Shure, now," replied the Irishman, "not half such a fool as I'd look trying to milk a bicycle."

Experiments have conclusively demonstrated that cows which are stripped quite dry at each milking not only continue longer in milk, but produce a greater quantity of milk with exactly the same feeding, than if the animals are carelessly stripped and a certain portion left behind at each milking.

Artificial milk is now being manufactured and placed on the market. The ingredients are given as water, fat, albumen, casein, sugar; oxygen, hydrogen, nitrogen and sulphuretted hydrogen; kreatin, pepton and tyrosin. The promoters contend that the product turned out is much more cleanly and healthful than the output of the cow housed and kept in the usual way.

The milk veins found along the belly of the cow should be very tortuous. They wind about on the belly and pass into the body, through orifices in the rear of the fore flank. Their duty is to convey the venous blood to the lungs for purification. Hence, the larger the vein and the greater its ramifications, the better indication it is that the circulation of the blood through the udder is very large; and naturally the larger the circulation of the blood the greater will be the milk production; because milk after all is really a product of the blood.

Professor J. W. Robertson, Dairy Commissioner for the Dominion, is reported as saying the following of our trade prospects on his return from his recent trip to Great Britain:—"On the whole, I found our products were taking a better place every year in the English market. The president of the wholesale provision trade in Manchester said, that whereas six or eight years ago Canadian butter had a bad name in the market, it was now rated as being almost on a par with the best Irish creamery, and running the finest Danish very hard for first place. The market price will warrant that statement. Ten years ago we sent only 7 per cent. of the main foodstuffs which Britain imports, while last year we sent 16 per cent. There is no reason why we should not keep up the rate, and in ten years more send 30 per cent. of these foodstuffs to the British market."

C. A. Murray, Dairy Superintendent, Manitoba, recently made a round of some of the cheese factories to the east of the Red River. He reports

some improvements in the factories, but says there is still room for a good deal more. At one factory he visited the cheese was of superior quality and he soon found that the maker was using Marshall's rennet test and other up-to-date tests to keep him right. Racks were also used in the vats. Most of the factories are dispensing with curd sinks, but are not using the racks in the vats. This is an easy way of getting along, but is not conducive to making the highest quality of cheese. He found the majority of the curing rooms in poor shape. Some of the owners say they will make improvements, but others are not inclined to do so. The Farmer hopes that the buyers of cheese will discriminate justly and rigorously when buying cheese. We have said it before and say it again, that the buyers can greatly improve the quality of cheese in Manitoba if they would adopt such a course. It is possible here as not in many other places, because of the peculiar condition of things.



First Trial Relieved Piles.

From Geo. C. Geick, Owens Mill, Mo.: "Some time ago I bought a package of Pyramid Pile Cure for my wife, who had suffered very much. The first trial did her more good than anything she has ever tried. It is just what is claimed for it for she cured her completely." For sale by all druggists. Little book, "Piles, Cause and Cure," mailed free. Pyramid Drug Co., Marshall, Mich.

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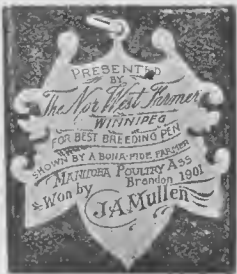


No Manitoba Poultry at the Pan-American.

It was intimated in last issue that the poultry association was trying to arrange an exhibit of Manitoba poultry at the Pan-American exposition. To make such an exhibit a possibility it would be necessary for the Provincial Government to put up the money to pay the entrance fees and expenses of a man, or possibly two men, who would go in charge of the birds and see that they were shown in proper shape. The Government have refused to put up the money necessary, so the whole scheme has to be abandoned.

The Nor'-West Farmer's Gold Medal.

We have pleasure in presenting to our readers illustrations of the gold medal presented to J. A. Mullen, Cypress River, Man., for the best breeding pen shown by a bona fide farmer at the



last Manitoba Poultry Association's exhibition at Brandon. The obverse side of the medal bears the inscription as seen in the illustration, while the reverse side has a pair of Indian Games engraved on it, as the medal was won on a pair of this variety. The medal is in the form of a heavy watch



charm and Mr. Mullen wore it with great pride at the Winnipeg Industrial Exhibition and was never tired of showing it to his friends. He is right when he says "It's a beauty." Here's what he says:—

The Nor'-West Farmer,
Winnipeg, Man.
Gentlemen:—

Your valuable gold medal given for the best breeding pen of fowl raised by a bona fide farmer in Manitoba or the N.W.T. was received from you some time ago, and being away from home I could not acknowledge it sooner. My best thanks for the medal. It is a beauty. I will wear it for the honor of the victory represented by the same.

I am, yours truly,

J. A. MULLEN.

The Early Moulting Hens.

Some people sell the hens that moult early, because they cease laying and are therefore considered of no further use. This is a mistake, for all hens must take time to shed their feathers and get a new coat. Some begin early in the summer, others later. Some re-

quire three months to get their new coat, others possessing more vitality do so in six weeks. This is about the shortest period in which the change can be made; but the three months often taken can be greatly shortened if the hens are given proper food and care. Feathers are rich in nitrogen and mineral matter, therefore, linseed meal, bone, meat, milk, etc., should be supplied in preference to grain. They should have free access to grass, and as their covering is thin they should be protected from dampness and cold.

Keep the hens that begin to moult early as they will be the early layers, and some of them will be at work laying before the others have begun to shed their coat. When you sell the early moulting hens you sell the very hens that will make you good money later on in the fall and early winter. If you must sell some of them sell the fat lazy ones, the hens that do not lay.

Old hens moult earlier than the pullets, because they begin about eleven months from the last moulting, which causes them to begin a month earlier every year. It will be noticed that the hens which moulted in August of last year began in July this year.

Fattening Chickens.

The time for finishing poultry for the market will soon be here and farmers should be thinking about getting their birds ready for fattening. The first thing to be done is to separate the males from the females. So long as they all run together the best results cannot be obtained, besides it is not necessary to feed those to be kept at home to increase the flock as heavily as those intended for market. Last fall the Ontario Government used 61 chickens in an experiment in four lots of 16 each to determine the relative values of different ways of feeding. One lot ran loose as they would in an ordinary farm yard, a second were loose in a box stall about 12x12 ft. on a scale similar to that used by W. M. Champion, Reaburn, last fall, for fattening his chickens. A third lot were fed in crates without cramming and the fourth lot in crates and crammed the last eight days. The lot running loose in the yard received a supply of the gluten meal and chopped oats and barley that was fed to the regular barn yard flock. The ration of the other three lots consisted of half corn and half barley and oat chop and all the birds had skimmed milk.

THE GAINS.

The experiment began on Sept. 17 and continued to Oct. 15. The lot running loose weighed 54 lbs. when the feeding period began, and 69½ lbs. at its conclusion—a gain of 15½ lbs.; the box lot weighed 52 lbs. at the beginning and 74 lbs. at the ending—a gain of 22 lbs.; the crate fed, but not crammed lot, began with a weight of 59 lbs., and ended with 88 lbs.—a gain of 29 lbs.; the crate fed crammed lot weighed 69 lbs. when they were put up and 110 lbs. at killing time—a gain of 41 lbs.

The birds were mostly well graded Rocks and of good average quality. Those that were loose and in the box, the first two lots, had the advantage, if there was any, in that they were lighter when the experiment began, and as chickens are great eaters they should have made the quickest gains. This shows more clearly the value of the cramming machine. Professor Graham, the poultry manager of the O.A. College, Guelph, expresses himself as being of the opinion that a chicken fed a week at the trough, then crammed for eight days, will show better results than those fed at the trough for three weeks. A few chickens will do just as well at the trough as if forced with the cramming machine, but fully three-fourths of the chickens fed will give better returns for forcing.

EGGS! EGGS! EGGS!

Only five days old. Will bring you fancy prices. Write for particulars.

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A grand lot of breeders of the above varieties for sale, to make room for 400 growing chicks.

The above stock has a prize record unequalled.

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OAK GROVE POULTRY YARDS

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WINNIPEG, MAN.

Toulouse, Embden, White and Brown Chinese Geese.

Barred Rocks, Light Brahmas, B. Javas, S. L. Wyandottes, R. C. Brown Leghorns, Houdans, (five birds shown at Brandon, 1901, averaged 94½ points) B. Minorcas, B.B.R. and S. D. Game Bantams

Geese Eggs, 35c each; Turkey Eggs, 25c each; other eggs, \$2 per setting of 13, \$3 for 26.

INCUBATORS—Sole agent for Man. and N.W.T. for Geo. Birtel & Co.'s Imp. Victor Incubators and Brooders, Mann's Bone Cutters, and Wire Poultry Netting. Write for circulars and catalogues.

CHAS. MIDWINTER, LOUISE BRIDGE P.O., WINNIPEG

EGGS FOR HATCHING

\$2.00 for 13 White Wyandottes, W. Rocks, Houdans. \$2.00 10 M. Bronze Turkeys. \$1.50 Pekin Ducks.

Fancy Pigeons always on sale.

JOSEPH WILDING, Winuipeg, Man.

SUCCESS POULTRY YARDS.

First Prize! First Prize!

That is what J. A. King's Barred Plymouth Rock Chicks of 1901 received at the Winnipeg Industrial. If you want a good pair for a fall show I can supply you at reasonable prices. Over 100 good young breeding birds for sale from \$1.50 up.

J. A. KING, Prop., 94 Gertie St., Winnipeg.

MOUNT PLEASANT POULTRY YARDS

We are taking orders for young birds for fall delivery in our B. Minorcas, S. C. B. Leghorns, W. Wyandottes. Have also a few choice cockerels in B. P. Rocks. We will also have for service this coming season our registered and pedigree boar, "Chancellor," purchased from J. A. McGill, Neepawa, at the Winnipeg Industrial, after having been awarded the "red ticket." Animals sent in on train will be properly attended to and returned to train. Hoping that the farmers and others in this vicinity will take this advantage of improving their stock. Address

J. H. DAWSON, Mgr., 282 Ellice Ave., Wpg.

THE "HUB" POULTRY FARM KILDONAN.

We are now offering at special prices, for quick sale, the male birds of our breeding pens. Write for particulars. Rose Comb Black Orpingtons, Barred Plymouth Rocks, Black Minorcas, S. C. Brown Leghorns. The above birds are just what is wanted to improve your stock.

T. W. BRADY, Drawer 1270, Winnipeg P. O.

G. H. GRUNDY, VIRDEN, Man.

Breeder of high class Box 688

B. P. Rocks, S. L. Wyandottes, B. R. Game, Golden Duck-wing Bantams
EGGS from the best stock I ever owned at \$2 per setting. I have four breeding pairs of B. P. Rocks, mated for best results, and can fill orders part from each pen if desired. Eggs are hatching well, and chicks are good and strong. Satisfaction guaranteed.

The Home of the
BARRED PLYMOUTH ROCK.

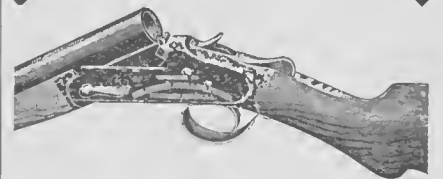
As I raise no other breed, I aim to have the best in the Province, and shall sell a limited number of eggs at \$3 per setting 2 settings \$5. I also breed Bl'k African Bantams. A few choice birds for sale. Also Fox Terrier and Scotch Collie Dogs.

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ST. JAMES, MAN

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The Best Value in Canada
THE
HINGSTON SMITH ARMS CO.,
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THE PROFITABLE HEN

is the one that will lay both winter and summer. Green Cut Bone will make her do it. It has been found by actual experience to double the eggs in every instance where used. The

ADAM GREEN BONE CUTTER
cuts bone in the most satisfactory way. Leaves the bone in fine shavings easily consumed by chicks or mature fowls. Can't be choked by bone, meat or gristle. Cleans itself. Turns easiest because it is the only cutter made with ball bearings. Several sizes for hand and power. Catalogue No. free. W. J. Adam, Joliet, Ill.

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Illustrated Catalogue, 5c. per mail.
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throughout Canada is at the head of all other Grain Cleaners in use in the Dominion, and is last accomplishing the same result in the U.S. If you want a mill, be sure and get the one that has gained a reputation by general use, which insures you against making a mistake. A full line of repairs always on hand at Brandon.

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When writing, please mention this paper.



A representative of The Farmer had the pleasure recently of visiting a few of the breeders of pure bred stock in Southern Manitoba. The first stop was made at

Manitou.

Here we took a run out to the farm of Dr. Young, who is well known as a speaker at institute meetings and a capable judge of horses at local shows. He has about a dozen head of Shorthorns and about 40 head of grade cattle. The sire at the head of the herd is British Tom, an all red animal bred by D. Fraser & Sons, Emerson. He is of good size and of a most useful kind, though not in as high flesh as we like to see a valuable sire. Our choice of the cows which made up the herd was Irene, a four-year-old of high quality. She stands on short legs, is a capital handler and is in the best of condition. This year's crop of calves is the best he ever had. Dr. Young believes in good stables, for he has a stone one for his cattle, 105 x 35, and another for his horses, 50 x 36. A wind mill pumps the water, crushes grain and runs the cutting box.

Jno. S. Robson, Manitou, was next called on and though very busy both building and harvesting, took time to show us over his pasturage, which contains 1,500 acres fenced in one field, in the valley of the Pembina, where we saw a number of the stock. The herd consists of 60 cows, 58 calves and two stock bulls. Bismark, 28313, a roan, three years old, bred by Jas. Gibb, Brookdale, Ont., is a straight lined, well fleshed, short legged fellow, with a good skin and doing well at the head of the herd. We don't like his horns, but he is a good all round bull. The other bull is Royal Judge, 29260, a two-year-old roan, bred by Hon. Thos. Greenway, sire Judge, dam Roan Mary, third at Winnipeg as a two-year-old in 1899. This is a growthy youngster with a mossy coat, well fleshed, and is proving himself a good stock getter. Though Mr. Robson does not believe in loading his stock with flesh, still all were in good growing condition and many choice young things were to be seen in this herd. Mr. Robson is building a solid brick house, two and a half stories high, on a 9-foot stone wall the full size of the building. The main part of the house is 26 x 32; adjoining this is the kitchen and wood shed, 22 x 34, and only two stories high. He is also putting up a horse stable on a stone basement, 36 x 66, with 10-foot wall, which promises to be a comfortable building.

W. E. Baldwin, Manitou, was also seen. He had lost his barn by fire the morning of our call, and some of his swine could not be found. Still, some of the Winnipeg prize winning Tamworths were seen and have come along well since the fair. A pair of splendid sows are due to farrow in a few days. Mr. Baldwin reports sales for swine good, the demand steadily increasing for really good things. In Shorthorns Mr. Baldwin has only five head, but takes extra good care of them. His bull, Village Duke, bred by A. Graham, is now three years old and has come along well since we last saw him. He is in good fettle and is a choice bull and a good stock getter. Our choice of his cows is Red Beauty, a three-year-old in good flesh. She is again heavy with calf. Her last year's is coming along well and will be heard of later.

Pilot Mound.

The next stop was made at Purves Thomson's, Pilot Mound, who is well known to our readers as a breeder of choice Shorthorns and Clydesdales. Purves station, on the Snowflake extension, is located on his farm. Mr.

Thomson has spent a lot of time in planting a grove of trees and shrubs about his buildings. He has some 12 acres encircled with belts of trees, in the centre of which the buildings are located. Mr. Thomson farms a section and among other things grows 4 or 5 acres of turnips each year. His root house, on the ground floor of the barn, will hold some 40 odd loads. They keep perfectly without special protection. Three years ago Mr. Thomson sowed some red clover with timothy on a couple of acres as a trial. The clover is still there, though the

timothy is crowding it out somewhat. Mr. Thomson thinks that alsike will do better than the red and that either will do better as a single crop than with timothy, but he considers timothy the hay crop for this district, as it does better with him than even in Ontario. A dozen Clydesdales make up the stud. The stallion used is Grand Prize, 2440, sired by Grandeur, imp., bred by D. & O. Sorby, of Guelph, Ont. He is a bright bay, having white face and feet, with plenty of style and action, is well coupled and in good bloom. He has proven a good sire. Lady McArthur,

2206, is a 7-year-old large, roomy mare with good legs, and heavy with foal to Grand Prize. Scottish Maid, a brown three-year-old home bred, sired by Sir Patrick, imp., is an outstanding mare of extra good size, also bred to Grand Prize. The Shorthorns are a grand lot. The stock bull, Caithness, 22065, is one of the best known bulls in the province as a show animal. He is in as good condition as we have seen him and many choice young things sired by him were seen, proving him as useful at home as in the ring. Royal Caithness, a red roan 10 months old

A \$65.⁰⁰ SEWING MACHINE For \$24.⁹³



There is no reason in the world why anyone needing a Sewing Machine should go without one. Our price is certainly low enough to enable anyone, no matter whether rich or poor, to add this most necessary article of furniture to the home. When it was necessary to pay from \$65.00 to \$100.00 to a Sewing Machine Agent, a Sewing Machine might have been considered in the way of a luxury; at the present time when by us the price is much more than cut in half a machine is not a luxury, but a necessity.

This is positively the greatest and most wonderful Sewing Machine offer ever made in Canada. This machine is of the highest grade of mechanical construction and equal in every respect to machines sold by agents for \$65.00

The Head is very strong and substantial, neat and handsome in design, finely enamelled and protected by a hard finish. It is beautifully ornamented with neat and appropriate designs with enough delicate color to relieve the plainness, making it very pleasing to the eye. The space in the centre is 5½ x 8 inches, hence you will notice it has the highest arm used on a family Sewing Machine. The movement is double eccentric on main shaft for operating the shuttle and feed levers and so perfectly balanced that the vibration is reduced to a minimum. **The Eccentric Movement** will outwear any other device ever invented and is used exclusively on our Sewing Machine. All bearings and wearing parts are made of the finest steel, carefully hardened and made adjustable; all lost motion can be easily taken up by simply turning a screw or nut. Therefore the machine will always be kept new and wear a life time.

The Needle is self-setting both as to height and position; short blade and large shank insuring great strength. The Needle Cannot be Set Wrong, thereby saving time and prevents the breaking of needles. **The Stitch** is a double thread lock stitch the same on both sides, will not ravel and can be made either long or short by simply moving the thumb screw. **Sample of Stitching will be sent on application.** **Self-Threading vibrating Shuttle**—a perfect cylinder steel shuttle, open at one end to allow the bobbin to be inserted without displacing any of the parts; easily put in and taken out; holds a bobbin that carries a large amount of thread. **The Shuttle is made so that it is impossible to thread it wrong**—it is truly a model of simplicity. The needle bar is round and made from the finest steel, carefully hardened, fitted with adjustable bearings. **Improved Automatic Bobbin Winder**—so simple that a child can easily operate it. **Improved nickel plated Loose Wheel**—winding the bobbin without running the machine. **Adjustable Presser Foot; improved Shuttle Carrier.** Has heavy nickel-plated face plate.

The Woodwork is of Select Seasoned Oak, quarter sawed, and finished equal to the finest grade furniture; its four drawers are ornamented with fancy nickel-plated drawer pulls; the shapely and not clumsy stand is made of the best Smyth iron japanned by the most approved method known; the anti-friction treadle bearings insure free and easy action and makes it the least noiseless, the easiest operated and the lightest running machine sold anywhere. It is simple in construction with few parts and hence will always perform its functions with the least possible trouble. Its simplicity, durability, reliability, speed, strength and ease of movement make it the most desirable Sewing Machine in the market.

Nickel Steel Foot Attachments Free in metal case. One Rufer or Gatherer, one Shirring Plate, one Binder, Set of four Hemmers of different widths up to ¾ of an inch, one Tucker, one Braider, one Quilter, one Attachment Foot, one Thread Cutter. We also send free the following accessories: One Foot Hemmer and Feller, one Package Needles, Six Bobbins, one large and one small Screw Driver, one Oil Can filled with oil, one Instruction Book.

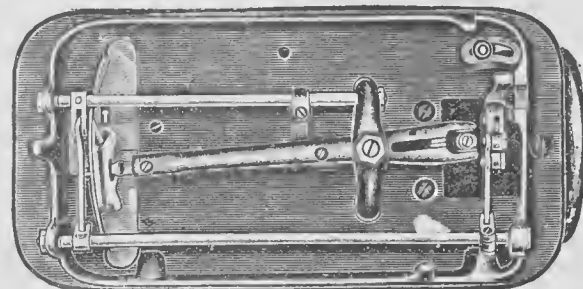
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the machine at your home for fifteen days. If, after a thorough examination, you are not perfectly satisfied with it you may return it to us at our expense and we will immediately refund the full amount paid. Do you think we could afford to make this liberal offer if we did not believe the machine equal to all we claim for it?

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With every one of our \$24.93 Machines we issue a written binding guarantee, good for 5 years, by the terms of which if any part gives out by reason of defective material or workmanship we will repair or replace it free of charge. This does not apply to needles, shuttles or attachments.

Do not allow any Sewing Machine Agent to prejudice you against our machines. Of course they would rather have you order from them and pay about twice our price, but the best way is to satisfy yourself, which you will do if you order from us. **We Don't Want a Dissatisfied Customer.**



Under view of head, which sets into a japanned metal, dust-proof drip pan. Oil cannot drop through and soil clothing.

If you buy a Sewing Machine from us and have any difficulty whatever, it is only necessary to write us stating wherein the difficulty lies, and we will promptly reply to your letter, giving you more thorough instruction than you could possibly gain from a sewing machine agent or demonstrator. **If we fail to satisfy you by letter** we will allow the return of the head or working parts of any machine purchased and will place same with our factory, having it readjusted and made exactly as good as the day it left our house. **We know that a satisfied customer is the best advertisement we can have.** It is not our aim to sell but one machine in a locality, but to have each machine we ship out prove so highly satisfactory to the purchaser that it will bring us from ten to a dozen additional orders from the same section. **Read the Descriptions** of this machine carefully, compare prices with those quoted elsewhere, and we know that you will decide to favor us with your order. If your order reaches us, rest assured it will command our most prompt and careful attention.

The F. O. Maber Company WINNIPEG, MAN.

If interested, write for our Fall Catalogue, free for the asking.

cal, home bred, sired by Caithness, dam 12th Duchess of Rosedale, is a smooth all round calf that promises well both for size and quality. Out of a very choice lot of cows those with the greatest amount of outstanding merit are Marchioness 10th, a roan 6-year-old, with a broad, level back, well fleshed and roomy; Lady Somerset 5th, a roan 2-year-old, bred by R. P. Logan, Thorndale, Ont., an extra well formed heifer with plenty of flesh, a good wide back and perfect head; Pilot Mound Leaf, second as a 3-year-old at Winnipeg in 1900, an all red cow of both size and quality, in great flesh and has a calf at foot, of which Mr. Thomson is justly proud; Roan Mysie, 5 years old, bred by Hugh Thomson, St. Mary's, Ont., having an extra well sprung rib, straight top and bottom lines and in good condition; Minnie May, a white 4-year-old, got by Hillary and worthy of mention for evenness of flesh and good handling; White Rosebud, a 6-year-old, placed first at Winnipeg in 1895 as a yearling, even fleshed and handling well; Mysie's Gem, a red 2-year-old, is well underlined, large for her age, in great bloom and in calf to Caithness; and 12th Duchess of Rosedale, a cow of good size, carrying a wealth of flesh and one that has thrown exceptional stock.

Ninga.

Wm. Ryan, of Ninga, was the next seen, and though he has only 10 Shorthorns he has a choice sire at their head. Visitors to Winnipeg fair this year will remember the white calf, Lord Mysie of Ninga, shown as a yearling, which was an easy winner in a strong section. He has come along well since the fair and promises to be heard from again. Of the other stock seen Stella Jane, a 4-year-old red cow, is of the useful type and in good flesh. She is a breeder to be proud of, as she is now suckling the second calf inside of 12 months and has been served again. A 5 months old bull calf by Crimson Chief, out of Stella 2nd, is a nicely put up youngster on short legs, of blocky build. Another bull calf by Sittytton Hero 7th, only a month old, gives great promise. He has a good form, and with the care he is sure of in Mr. Ryan's hands, will undoubtedly develop well. Mr. Ryan has some 25 or 30 head of grades, many of which are well graded Shorthorns. He also has a couple of acres of corn which has given a great crop. It will be left in stock until wanted and run through a cutter before fed.

J. G. Washington, Ninga, was next seen. He has a grand lot of Shorthorns and the rising generation promises to be even better, as the stock bull used on this herd for the past year was Sittytton Hero 7th, sweepstakes at Winnipeg for the past two years. This great show bull went to the Prairie Home Farm just previous to the fair and has gone on to Toronto and the Pan-American. His place is filled here by Cumberland, 38826, sired by Bonny Lad, by Blue Ribbon, imp. His dam is Julia Lind, bred by A. B. Fisher, Ashburn, Ont. He was shown as a 2-year-old and was placed second to the sweepstakes bull in his class, though he showed at a great disadvantage, being 11 months younger than he could have been. He is a thick massive roan, with a mossy coat and a grand even back, is on short legs and will undoubtedly again prove Mr. Washington's good judgment in selection. Rose Bud, a roan 3-year-old, sired by Royal Hope, dam Gem of Lakeside, is a heifer of quality, with straight lines bottom and top. She has an extra good back with plenty of flesh, a well sprung rib and is suckling a 6 months bull calf, which is of good length and width. The foregoing cow is only a fair sample of a dozen others, all of which are worthy of mention. In all Mr. Washington has about 25 head of Shorthorns, and their general high quality can best be understood when it is known that a bull from this herd now heads that of N. P. Clark, St. Cloud, one of the foremost herds in Minnesota, and that the sire of the

herd for a year is twice sweepstakes bull at Winnipeg. Of Mr. Washington's ability as a feeder and breeder we need no better commendation than the excellent condition of his stock at home and the condition stock that he owned at one time were in at Winnipeg fair. He will yet make a good name for himself in the Winnipeg show ring.

Wakopa.

Southeast from Ninga some 10 miles and about 13 miles southwest from Killarney, is Brookside Farm, at Wakopa, the home of Alex. Stevenson, who farms a section of land through which runs the White Mud River, supplying it with running water the year round and thus eminently adapting it to stock raising as well as grain growing. In all Mr. Stevenson has some 30 head of Shorthorns. The females show considerably more than the usual udder development seen in a Shorthorn herd. The cows were all out at pasture at the time of our visit and in excellent breeding and thrifty growthy condition, without being overloaded with useless fat, and this though we were assured that no grain had been fed since the cows left the stable. The stock bull that used to head the herd was disposed of some time ago and Brazelet's Hero, a seven months old calf from the Prairie Home, has been purchased to place at the head of the herd. This calf is by Sittytton Hero 7th, sweepstakes bull at Winnipeg, and

Wolseley.

While at this place attending the fair, a Farmer representative had the pleasure of being one of a party to visit the Perley Farm, the property of Senator Perley. This farm should have been called park land from its resemblance to a great park, as the district here is dotted with clumps of trees as far as the eye can reach.

The farm is located just north of the town and contains 4,320 acres. It is divided in halves, each of which is under the management of one of the Senator's two sons, Arthur A. and Ernest E. Perley. The land in crop this year is about 400 acres of wheat, 90 acres of oats, 8 of barley, and 2 of rye. It is an exceptionally heavy, even crop. Professor Shaw, who was also with the party, said that he thought the crop here the best he had ever seen.

The crop rotation to be followed is to sow wheat after breaking, or summer fallow, burn off the stubble in the fall or spring and sow wheat a second time, or oats without plowing. After the second crop sow to brome, without a nurse crop. This is cut the following year for hay or seed. The land is then pastured for two years, when it is again broken and backset.

About 40 cows are kept and are milked 8 months in the year. The creamery is an up-to-date one. A one pony tread power runs the separator, churn and all other machinery. A small boiler is kept for heating water and

spent a very large amount of money and time in setting out trees and shrubs for shade and ornamental purposes, and of the many thousands planted enough have lived to make their place a striking example of the possibilities in the northwest along the line of ornamental tree planting. Dr. Saunders expressed both pleasure and surprise at the success of this fine display of tree growth. We were equally gratified at the abundant yields of grain in the district we drove through. A photo engraving of this place will appear in a later issue of The Farmer.

On the Rainy River.

A representative of The Farmer spent a very pleasant time lately on the Rainy River and it may be interesting to the men of the prairie to get a few details of the mode of farming practiced on the fringe of the forest which covers most of that section of Western Ontario. Up to date the traffic along the river has been by steamboats running from Rat Portage to Fort Francis and Mine Centre, but already the ancient regime is being enervated on and in a few weeks the whistle of the railroad train will compete with the call of the river boat for the traffic which the district furnishes. The track of the Canadian Northern R.R. runs along the back end of the river lots,



CREAMERY ON THE FARM OF SENATOR PERLEY, WOLSELEY, ASSA.

out of Brazelet 8th. The calf is a good one, being well developed, of the thick fleshed kind and good enough to win third place at this year's Winnipeg Industrial. A red and white bull calf, Brookside Wanderer, attracted our attention. He is a capital handler, in good flesh, now 14 months old, and promises to make a good bull, possessing both size and quality. Our choice of the females was Brookside Beauty, by Crimson Chief and out of Daisy Star. She is an animal of the right kind, with pleasing lines, a good handler and carrying a wealth of flesh. Another 2-year-old of promise is Brookside Daisy, out of Daisy of Wakopa. We notice a marked improvement in the young stock on the farm over the older animals. The younger ones show those heavy fleshing qualities so much desired by all lovers of beef cattle. This year's calves are a fine healthy lot. We are rather looking for another big improvement in the quality of the calves from the new head of the herd when mated with the young female stock now on the farm. Mr. Stevenson sowed rape on a piece of backsetting with the ordinary grain drill and has had the best of success with it. He cuts a little and feeds it each night and morning to his calves and they relish it immensely. The stubble of that cut early is now showing a splendid second growth. Mr. Stevenson finds the grain drill satisfactory for sowing turnips, mangels, carrots, rape and corn.

the steam is used for cleansing purposes. The skim milk is fed to the calves warm from the separator. One calf to each cow is being raised. A number of pigs are also kept to use up the buttermilk and other slop. There are two pasture fields well fenced of 640 acres each. One is used exclusively for cows and heifers coming in; the other is for horses and young stock. These sections will be cropped in turn with other land on the farm.

South-West of Regina.

In company with Dr. Saunders, director of the Dominion Experimental Farms, a representative of The Farmer recently drove from Regina 22 miles south-west to G. and B. Spring-Rice's home. Harvesting was general at the time and the crops were in excellent condition. The Messrs. Spring-Rice have a farm of over three sections, but only about six hundred acres have so far been cropped. This year about 500 acres of wheat and 100 of oats and barley were grown. The system of cultivation is to take two crops off after summer fallow, the second without plowing. The third year the land is again summer fallowed. The house is a most comfortable and commodious one. The outbuildings consist of two large bank barns as well as several smaller buildings. These brothers have

just as the C. P. R. does between Winnipeg and Selkirk, and the new mode of transport is bound to make a greater change even in its farming than some people now see. Owing to a treaty based on great ignorance of the geography of the unexplored country of which this is a part, the U. S. got the right to a large stretch of country that naturally belonged to Canada, and for which so far it has had almost no use. For this reason the C.N.R. in its route south-east has to cross many miles of Minnesota before it re-enters Canadian territory at Beaver Mills, on the Rainy River.

There is next to no settlement whatever on the Minnesota side of the river. Except for a patch of a few acres of stumps and a farm house to match, the country along the American side is an unbroken mass of thick bush in which poplar is the predominant growth. The settlement along the Canadian side dates back a good many years, but most of it is less than 10 years old. It takes about that time for the yard high stumps to rot, so that in a slack season they can be pulled up, and till that time comes the crops must be such as can be had by patient cultivation among the stumps that in most cases stand very near each other. At first sight it seems as if people there must never have heard of a prairie country where a man can break one year and grow the next more acres of grain than he has to show after 10 years'

work poaching among stumps and cutting his crop with a scythe.

But there are men along that river who have actually gone there from Neepawa and Whitewater. "The case being altered, that alters the case." There are conditions, or at least have been, up till now that makes this 50 year back style of farming pay some people fairly well. Potatoes and oats have always been from 50c. to \$1.00 a bushel, hay \$10 a ton and butter 25c. to 35c. a pound, and any man could make \$1.00 a day working in the lumber camp when nothing else was in sight. In this way men who went in with little more than an axe and the will to work are now living fairly well and a good many have very nice houses on their lots, with an average clearing of 30 to 50 acres, part of it still in the blackened stump stage of progress. Lumber has been more frequently used than logs, for till recently it could be had very cheap.

The subsoil of the country is nearly white, and in many cases this white, compact soil comes clear to the surface. The hollows in this rather flat surface are filled with spongy swamp muck, that, if deep, takes years to firm after the timber has been cleared off it. If there were an even layer of a few inches of this rotting vegetation all over the white clay it would bear wonderful crops for a long time. An inch or two of the muck makes a soil in which anything will grow. The great difference between all this country and the western prairie is in its power to grow clover. If a farmer spreads in winter a few loads of manure from his stable there will be a fine stand of red clover in the following fall, just where a Red River man would be sure to have stink weed. This clover, if mixed with timothy, makes the finest hay in the world for horses. You sow the timothy, the clover comes, more or less freely, of its own accord, as the conditions favor it. One man at Boucherville, below the first rapids, had 125 tons of fine hay, beautifully baled, lying on his wharf waiting for the boat to take it up to Fort Francis to be fed horses in the logging camps next winter, the price so baled is \$12 a ton on the wharf.

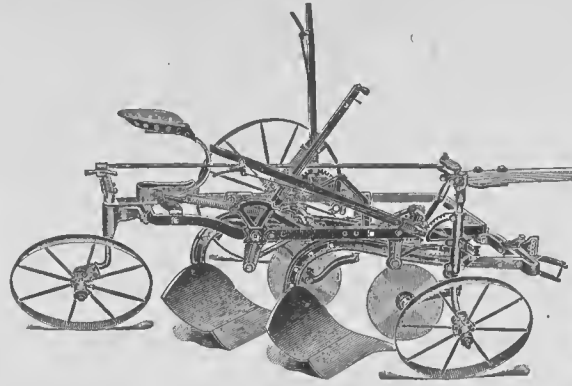
Every farm appears to have a wharf of its own, built of poles and covered with smaller poles, occasionally smoothed on the surface with an axe. It is like going into another world to sail in a little steamer even for one day along that river. We got on board at Beaudette the night before and the beds and board on any such steamer are capital.

The 800 ton centre span of the splendid iron bridge of the C. N. R. was swung in a few minutes and we crossed to the Canadian side, where we breakfasted and spent an hour while a few passengers sauntered on board and a miscellaneous lot of a few tons of goods were loaded. We glided leisurely and pleasantly along on the Edna Brydges, picking up a few bags of potatoes at one wharf, a passenger at another, and dropped a man or a few odds and ends at another, and, after about 15 miles of this had dinner. It was the same all the afternoon, a day of exquisite pleasure, sunshine and calm. Nobody can tell or guess just when the boat will come, she gives a toot when she has anything to leave and you wait her time if you mean to go with her. About dark we made Barwick, about 35 miles from Beaudette, having lost some time with a slight mishap to the screw of our boat while going up the rapids with the help of the Maple Leaf, whose principal business seems to be towing boats up the steep places of the stream. The Maple Leaf took off the more urgent freight and all the passengers to go on to Fort Francis, the writer staying for her return with Donald Matheson at Barwick. At this point the settlement goes further back into the country, with well graded roads, and it is said the land can be more easily cleared there. But it costs from \$40 to \$50 to make an acre of it fit to run a binder on, and when oats from the prairie can be delivered in Fort Francis at 30 cents and other things in proportion

the outlook may prove less attractive there, even for a man content with small beginnings, than it has been the last few years.

Mr. Matheson may be set down as a good example of a progressive Rainy River farmer. It is only a rented farm and he keeps 8 cows in milk, with a few sheep. He cuts with a binder and has good crops of oats, partly rusted, with some wheat and peas. His grain is mostly housed in a big barn, and this is the common practice. He fed swine with chopped grain and with such abundance of clover this is a likely industry, but for the cost of the land to begin with. In 30 years, by the help of the clover, the whole country might be made more fertile than it is even now. Who can forecast its rate of progress?

The Rathwell Farmers' Elevator Co., composed of farmers of the district, has been incorporated. It is the intention to build an elevator with chopping facilities. The capital stock is \$10,000, divided into 200 shares of \$50 each.



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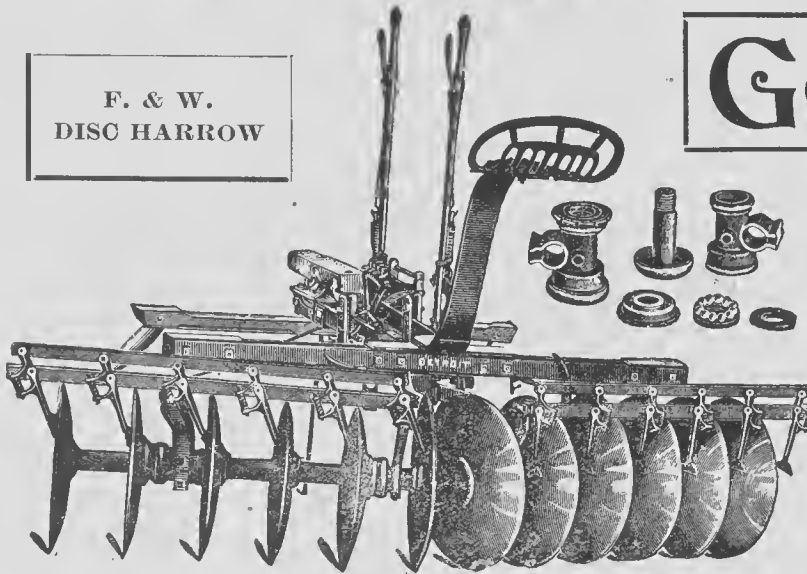
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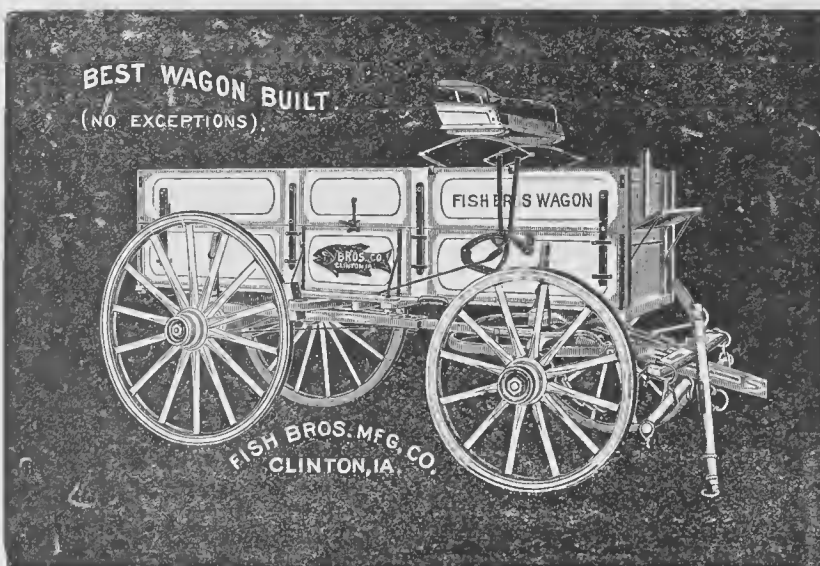
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The Nor-West Farmer

ISSUED TWICE A MONTH.

Established 1882.

The only Agricultural Paper printed in Canada between Lake Superior and the Pacific Coast. Issued on the 5th and 20th of each month.

THE STOVEL COMPANY,

Proprietors,

309. McDermot Ave. & Arthur Street,
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Subscription to Canada or the U. S., \$1 a year, in advance.—To Great Britain, \$1.50.

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It is the intention of the publishers of this paper to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favor if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

LETTERS.

Either on business or editorial matters, should be addressed simply "The Nor-West Farmer, P.O. Box 1310, Winnipeg," and not to any individual.

LOOK AT YOUR SUBSCRIPTION LABEL.

When you pay your subscription, watch the name label on the next two issues which you receive. On the first issue following payment, it might not give the correct date—the type-setting machine may make an error and the proof be not corrected before mailing day. But if the date is not correct on the SECOND issue, please notify us by postal card.

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Subscribers who miss any of the issues of "The Nor-West Farmer" should drop us a card at once and secure same, as we want every subscriber to get every copy. Do not delay in sending, as our supply of extras sometimes becomes quickly exhausted.

WINNIPEG, SEPT. 5, 1901.



IMPORTANCE OF STACKING.

A well-known business man who has been through the province told The Farmer that the farmers should make this splendid crop secure by putting it into stack just as soon as possible. He characterized in the strongest language possible the man who, for a few days' work, would run the risk of losing this year's fine crop, when he might be perfectly safe. He is right. Some men, however, will stook-thresh in spite of all that is said to the contrary. But this year the threshing machines cannot possibly overtake the work to do until well up to Christmas. There never was a time when more careful stacking was necessary than in this year of a big crop. Fine, clean grown straw will stand a lot of rain, but the coarse, sappy straw so common this year will not stand wet. Harvesting weather has been splendid, just capricious enough to warn wideawake men that their grain is safer in the stack this year, and it must be well stacked, too.

CANADIAN STORE CATTLE
IN SCOTLAND.

A meeting was held in Glasgow the other day at which leading representative farmers, butchers and stock salesmen from all parts of Scotland were present. It was presided over by the Lord Provost of Glasgow, one of the ablest and best known municipal authorities in Britain. Its object was to protest against the continuance of the regulation which requires all Canadian cattle to be slaughtered at the point where they are landed, within a few days.

The introduction of this prohibition reads more like a superstitious tradition from the middle ages than as a record of administration by one of the most enlightened nations of modern times.

In the early years of our cattle export business a slaughter house inspector at Deptford found a lung in one beast, we think that ox hailed from Pilot Mound, and its condition led him to think it might be due to contagious pleuro. That we need hardly say is a disease unknown in Canada, but it was a godsend to those who saw in the importation of good cattle from Canada, at prices defying competition, a menace to the British and Irish breeders whose beasts were much inferior in feeding quality to ours. To the breeders of Irish runts and the landlords whose incomes were threatened with this new invasion, this lung was a special providence and they made the most of it. It was of no consequence in such a case that Irish cattle have been a source of contamination and infectious disease for over half a century and have cost British stockmen untold sums for stamping out the diseases they introduced. It is a few weeks since we set foot on the Broomilaw, but the bruised and broken scrubs there unloaded from Irish boats are not things to be easily forgotten. Those who saw the Mennonite steers of fifteen years ago may have some idea of the feeding quality of an Irish one. For once the Irish patriot and the English landlord were in harmony and on a miserable pretext, nothing more, the regulations now in force were clapped on, of course to our serious detriment. They have never, out of the hundreds of thousands of our cattle, since then slaughtered under the most severe inspection, been able to detect any symptom of the disease which was the pretext for clapping on those restrictions, but the same interests must still be conciliated, and as we reported in our last issue, the Government holds out no prospect of this unjust barrier to the development of our cattle trade being removed.

Let us quote shortly from the arguments advanced at Glasgow for the withdrawal of those restrictions. Lord Provost Chisholm pointed out that the restrictions were introduced in 1892 as a temporary safeguard against possible infection, but in 1896, though not a tittle of new evidence could be found to prove the existence of such disease amongst our stock, those regulations were by special Act of Parliament made permanent. In his able review of the situation, the Lord Provost said: "Was there any evidence to warrant the maintenance of those most offensive restrictions? Was there evidence that there was contagious pleuro in Canada, and of such a kind and to such an extent as would justify the maintenance of those restrictions? He supposed they were aware that all the evidence pointed to the fact that there was no such thing as contagious pleuro in Canada, and that any ground which might have existed in the fears of the imagination of the Board of Agriculture had no foundation in fact."

The northeast of Scotland, where, if anywhere, farmers would naturally be jealous of the introduction of disease into the very counties which the best breeders of the whole world look to as the fountain head of improved beef cattle, there is an almost bitter feeling against this regulation. H. D. McCombie said the feeling in his part of

Aberdeenshire was stronger now than in 1892 and 1896, and in Fife, East Lothian and other great feeding centres, unanimous resolutions have been passed for the abolition of the Act.

Wm. Smith, representing Forfarshire, is reported as saying "his own experience was that these Canadian cattle were the healthiest that Scottish farmers ever passed through their hands, and the sooner they got them again the better for themselves and the commercial interests of the country generally, and more particularly the better for the landlords of Scotland. He was persuaded that in Forfarshire, if the Canadian cattle trade had not been stopped, rents would now have been 50 per cent. higher than they were, and farms with these increased rents would be far better worth taking for the farmer than they were now (applause)."

Baillie Lyon, of Aberdeen, who is in the meat trade, said the cry of pleuropneumonia was a perfect myth. He had never seen a particle of disease in any one of these cattle and it was politics and not public health that was the keynote of the situation.

These are but samples of the pile of evidence, the fruit of ten years' experience, that was offered at that one meeting in favor of the free importation of Canadian stockers.

Let us now, by way of contrast, give a brief sample of the rot talked by a paper which would fain be regarded as the leading farmers' oracle of the Scottish nation, in rebuttal of this mass of practical opinion. It admits that there were gentlemen present in more or less force from the twelve principal stock feeding counties of Scotland, and that they were unanimous in their opinion on the question. It then goes on to say, of the very men whose opinions we have just quoted from its own columns:—

"These gentlemen indulged in magnificent outbursts of clap-trap, and showed how useful they would be in talking against time in the British House of Commons. They found their oratorical counterpart in that windbag, Bailie John Ferguson, who managed to crowd an immense quantity of sheer balderdash into a comparatively limited space of time. The effect of the meeting will be nil."

The remedy for all the trouble, put forth by this great Scottish oracle, is to allow nothing but dead meat to enter any port in Great Britain. Well, we may adopt that course sooner than the Irish demagogues and English landlords anticipate, and when we do they will open their eyes very wide indeed.

NEW LAND REGULATION.

We learn that a regulation has been passed by the Governor-General-in-Council reserving all Dominion Lands comprised within even numbered sections from sale, in order that these lands may be available for settlement under the homestead regulations. We have no quarrel with the Government for doing everything in its power to attract immigration to our vacant western lands and, certainly, the fact of homestead lands being available, is in itself a very considerable inducement; but it seems as if a hardship was being inflicted upon the settlers already here by such a regulation. There can be no doubt that a quarter section of land is not sufficient, either for the wheat-grower or the stock-grower. On a quarter section, the man who prosecutes mixed farming can make a living, but that is all. It may be argued that he can purchase additional land from the railway companies. Quite so, but very frequently there is no adjoining railway land in the market.

It is only too true that there is very little gratitude shown the pioneer. He came to this country years ago, while it was more or less of a wilderness, he struggled manfully on against all sorts of difficulties and adversities and finally succeeded in establishing himself firmly. He was the original immigration agent, and a very effective immi-

gration work he did. It surely would be feasible to amend the regulation to read, that no even numbered section or part thereof shall be sold, except to homesteaders, who have earned patents prior to a certain date or individuals who were in permanent residence on adjoining lands before such date. Be generous with the man who made the Canadian West what it is to-day! Besides, presumably the object is only to guard against land being sold for speculative purposes, which could easily be done by imposing reasonable restrictions, without drawing any hard and fast lines, such as is done in the regulation complained of.

POORLY PLANNED SPOUTS
IN ELEVATORS.

During the past two or three years an attempt has been made to regulate the grain elevators in such a way to prevent, as far as possible, the distribution of weed seeds. We have just noticed, however, an elevator at one point operating in a way eminently calculated to make a sure job of weed distribution. The wind spout is arranged to blow right on to the top of cars being loaded, and to pile a lot of rubbish upon cars, only to be blown off and distributed all over the country so soon as the cars are hauled away. Surely our railroads distribute enough foul seeds without having elevators planned in a way so perfectly certain to help on the trouble. Should not the weed inspector look after elevators of this kind?

—H. L. Bolley, M.S., Professor of Botany in the North Dakota Agricultural College at Fargo, gave The Farmer a call recently. Professor Bolley has been on a trip through Western Canada studying fungoid diseases, such as rust, smut, etc. He reports having had a very profitable time.



GIRLS AT SCHOOL

While they are accumulating knowledge on the profound sciences, are often so ignorant of their own natures that they allow local disease to fasten on them to the ruin of the general health. Backache, headache, nervousness, point to a disordered or diseased local condition which should have prompt attention.

Dr. Pierce's Favorite Prescription may be relied upon as a perfect regulator. It stops enfeebling drains, heals inflammation and ulceration, and cures female weakness. *It makes weak women strong and sick women well.*

There is no alcohol in "Favorite Prescription" and it is entirely free from opium, cocaine and all other narcotics.

"Your letter just received," writes Miss Rose Kilfether, of 43 West Sharpnack St., Germantown, Philadelphia, Penna. "Words fail to express how thankful I am to you for your advice. I must confess that for the length of time I have been using your medicine I have found it to be the most wonderful and best remedy for female trouble that I ever have tried. Sorry I did not know of your 'Favorite Prescription' years ago."

Dr. Pierce's Common Sense Medical Adviser is sent free on receipt of 31 one-cent stamps to pay expense of customs and mailing only. Address Dr. R. V. Pierce, Buffalo, N. Y.

ONE DAY FAIRS.

In many cases the directors of local shows are holding a two-day fair when one day would be quite sufficient. It makes a very much busier day, to be sure, but by bringing events off sharply all could be done in one day. At one local show recently the only attraction was a lacrosse match the first day and the exhibits did not come in until the next. The first day was a decidedly slow one. People do not like to miss anything that is going on and yet feel that they cannot spend two days seeing what might be seen in one, if a little "hustle" was introduced.

THE AGRICULTURAL COLLEGE QUESTION.

In last issue The Farmer gave its views on the establishment of an agricultural college in Manitoba. Not for a minute do we wish it understood that we are opposed to an agricultural college. The thought we wish considered is whether Manitoba is ready for one or not. If we cannot get the students in our province to fill a college, what is the use of building one at this juncture, and especially so when the provincial treasury is in such a depleted state. Better wait a year or two until some new arrangement can be made with the Dominion Government re school lands and the annual grant, when there may be more funds available for this purpose. If the province cannot supply the necessary students, then the college will be filled up with students from the old lands, come out here to learn farming. In fact it has been stated that this is one of the main reasons for establishing a college. If this is so it would be the height of folly to build a college for educating such a class of boys. The experience with this class of student at other colleges has not been at all satisfactory and there is no sense or reason in repeating the experience here.

It will be an easy matter for the Government to test the province and see if the farmers' boys are ready to take advantage of such a course of training as is offered at an agricultural college. The plan we propose, to test the matter, is for the Government to offer to pay the extra cost of students who wish to attend an existing agricultural college over what it would cost attending one in the province. A student attending a college here will have board to pay, and books to buy, etc, just as he would at an outside college. The difference in expense will be the extra railway fare and any difference there may be in the tuition fees. These the Government can offer to pay for one or two years, as may be decided. Students might be offered the privilege of attending any one of the colleges in North and South Dakota, Minnesota, Iowa, all prairie States, and thus presenting similar conditions to our own province, or at Wisconsin, or Ontario, if desired. A prominent member of the local legislature said at a meeting called to discuss the question of an agricultural college, that it would cost \$100,000 to build and equip such an institution and \$40,000 a year to maintain it. By the way, there was an exceedingly small attendance at this meeting, there was a good deal of talking, but we noticed that there was not a farmer talking for the establishing of a college. The talkers were other people.

Now the point of our contention is this:—The interest on \$140,000 for a year will more than pay all the extra expense of all the farmers' sons in Manitoba who want to attend an agricultural college. We feel safe in saying that one quarter of this sum will more than be sufficient. It would be much better for the Government to do this and ascertain the true situation than to plume ahead and after a college was built find there were no students for it. If the response to such a test offer is liberal, then a college cannot be built too quickly. Nothing will be lost by waiting a year or two, provided the proper means are taken

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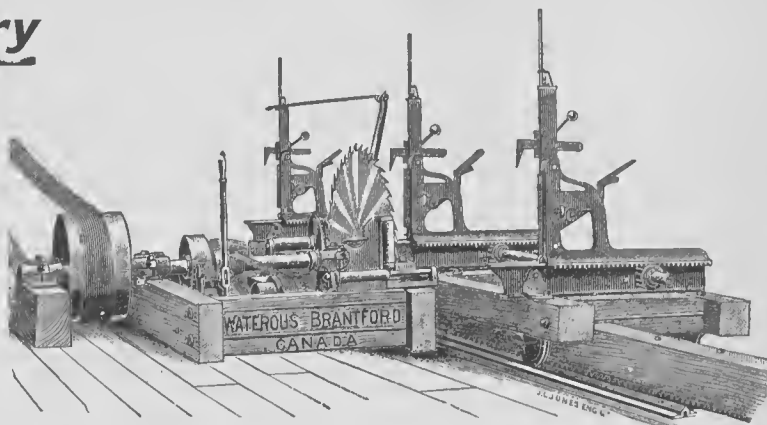
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to arouse a desire on the part of farmers' sons to attend. How to do this we will tell in next issue.

IRRIGATION AND WHEAT.

A study of the United States statistics of wheat production is of more than ordinary interest to residents of the west. We have on this side of the boundary line two great sections of country presenting distinct climatic differences, just as they have in the United States, where these sections are generally referred to as "the humid section" and the "semi-arid section." That portion of the Canadian West lying east of Moose Jaw corresponds to the former and the remainder of the Territories, lying south of Township Thirty-four, to some extent only, to the latter. In the principal irrigating States, that is, Utah, Colorado, Wyoming and Montana, the yield of wheat per acre runs from a minimum of 13 bushels up to a maximum of 32 bushels during the past ten years. The average yield would exceed 20 bushels per acre. When it is considered, that the general average of the United States runs somewhere about 12.50 bushels per acre for the past decade, the significance of the high yield under irrigation becomes apparent.

We often hear irrigating farmers say that it does not pay to grow annual crops under irrigation in this country and that the only paying crop under such conditions is hay, where the surface work and distributaries are only disturbed once every fourth or fifth year, when re-seeding becomes necessary. The cost of water per acre averages about one dollar and the surface work and distribution certainly should not cost more than an equal amount. In the United States we have a difference of seven bushels of wheat per acre in favor of the irrigated farm, according to most carefully compiled statistics covering over ten years. This result can hardly be considered to corroborate the statement that grain growing under irrigation is not a paying business.

—James A. Bray, eldest son of James Bray, the well-known stockman of Longburn, Man., has left for a two-year course at the Ontario Agricultural College, Guelph, Ont.

—A report comes from London, England, that in future the command of the Canadian militia is to be given to an officer closely connected with the Dominion. This is taken in official circles to mean that the next appointee will be a Canadian. This is a move in the right direction.

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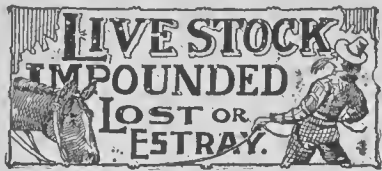
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In this department we publish as full a list of the impounded, lost and estray stock of Western Canada as is available. Notice in one issue, not exceeding five lines of lost or estray stock is given free to any of our subscribers who forward information. Notices exceeding above mentioned length will be chargeable at the rate of 10 cents per line on all overplus matter. The list of impounded stock is compiled from reliable sources.

All impounded notices appearing in the Manitoba and N. W. T. Gazettes will be found in this column.

By LOST stock is meant stock that has been lost and the owner advertises to find them.

By ESTRAY stock is meant stock that has wandered on to a person's place, or into his band, and is advertised to find the owner.

Write the letters of all brands very plainly. Display notice in black-faced type will be given for \$1 (which must be enclosed with the order), such notice not to exceed 40 words.

The following is a list of live stock impounded, lost or estray, since August 20th issue:—

Impounded.

Alameda, Assa.—One mare, 5 years old, brown, halter on, weight 1,200 lbs., indistinct brand on left shoulder; mare, 6 years, bay, star on face, hind foot white, halter on, weight 1,200 lbs. Charles Reed, N.E. 20, 4, 2w2.

Balcarres, Assa.—Mare, bay, white stripe on face, white star on forehead, branded D.Y. 5 on left shoulder; mare, about 6 years, bay, one white hind foot, no brand; mare, about 6 years, bay, star on forehead, branded N. on left shoulder, foal at foot; mare, about 3 years, seal brown, star on face, one white hind foot, blind in right eye, branded N. on left shoulder, foal at foot; mare, 3 years, bay, white stripe on face, no brand; gelding, 2 years, bay, star on forehead, black points, hobbie mark on front foot, branded A.K. on right hip; mare, 2 years, bay, white stockings on hind legs, one white front foot, branded square with T. inside on left shoulder, A.K. on right hip; mare, about 2 years, bright bay, star on face, no brand; horse, sorrel, white face, branded N. on left shoulder; mare, sorrel, white stripe on face, branded D.Y. 5 on left shoulder; gelding, 2 years, seal brown, star in forehead, white hind feet, no brand. John Morton, S.W. 23, 21, 11w2.

Beresina, Assa.—Mare with foal at foot, aged, white, grey under eyes, yellow near mouth. George Busch, S.W. 20, 23, 31w1.

Caron, Assa.—Mare, huckskin, branded C. on left shoulder, combination C.F. on right shoulder. A. H. Powell, S.E. 14, 13, 29w2.

Gainsborough, Assa.—Pony mare, sorrel, about 9 years, white stripe on face, left front foot white, rope round neck, indistinct brand on right shoulder; colt, 2 years, white roan, white star on face, sorrel mane and tail. Leslie Cowan, 19, 4, 30w1.

Hicksdale, Assa.—Pony mare, bay, white spot on forehead, tail and mane clipped, leather halter on, branded lazy D on left hip. W. Brown.

Lumsden, Assa.—Mare, about 8 years, bay, white face and three white feet, hack mane and tail, no brand, foaled since coming to pound; mare, aged, light huckskin, stiff in legs, no brand, huckskin foal at foot. W. R. Jamieson, N.E. 32, 19, 21w2.

Niverville, Man.—One two-year-old grey colt, branded on right shoulder, four white feet; also one black colt, two years old, no visible mark. John Harrison.

Pheasant Forks, Assa.—Mare, bay, 3 years, branded N. on left shoulder; mare, black, 2 years, ringhorne on right front foot, not branded. John W. Matthews, N.E. 26, 21, 8w2.

Summerherry, Assa.—Sow, white, about 3 years. Jas. Crozier, S.W. 30, 17, 8w2.

Lost.

Balcarres, Assa.—On July 12, bright bay horse, 4 years, star in forehead, three white feet, branded H. on left shoulder, about 16 hands, about 1,300 lbs., had set of harness on, rope around neck and through halter, small rope attached to bridle bits. \$5 reward. John, Morton, 23, 21, 11w2.

Hazelwood, Assa.—Sorrel mare, tail cut, blind in one eye, branded J. T. on hip, E. on shoulder; yearling mare, sorrel, branded J.T. on hip; bay pony stallion, white face, one eye white, branded box with T. inside, ears cut. Donald McKenzie.

Lumsden, Assa.—Since July 19th last, one light huckskin or cream pony, short white mane, three white feet, white face, white spots on sides. G. E. James, agent, C.P.R.

Whitesand, Assa.—One red steer, now 3 years old, little white, long low build, longish horns, branded H.P. on right hip, possibly indistinct. 10 reward. H. F. Prockter, Whitesand.

Wolsley, Assa.—About July 23, team of western horses, one bay, one grey, about 1,400 lbs. each, branded P. on left shoulder, had heavy leather halters on. Liberal reward for information leading to recovery. A. J. McPhail.

Yorkton, Assa.—One dark grey mare, 4 years old, with colt at foot, scar on off hind foot above fetlock joint; one bay horse 10 years old, white stripe on face, had halter on; one black horse 10 years old, small white stripe on nose. Wm. Strain.

Estray.

Bagot, Man.—One dark red steer calf, with small square bell and dubby horns. Walter Farncomb.

Dubamel, Alta.—Cayuss stallion, bluish grey, green or goggle eyes, small, about 7 years old, indistinct blur brand, resembling V. bar. R. Campbell, 32, 45, 20w4.

Estevan, Assa.—Since about July 25, horse, black, white hind feet, one white front foot, star on forehead, branded V. on left hip. John Ellis, 2, 3, 7w2.

Estevan, Assa.—Pony, chestnut, branded I.T. on left hip, C. on right shoulder; mare, yearling, chestnut, branded I.T. on right shoulder. W. Culver, 33, 2, 9w2.

File Hills, Fort Qu'Appelle, Assa.—Mare, large, roan, one white hind foot, no brand; mare, brown, branded C. with quarter circle over right shoulder. J. E. Johnson, 16, 24, 12w2.

Fort Qu'Appelle, Assa.—Since about middle of July, heifer, red roan, 1 year, no brand. Alex. Donaldson, 12, 21, 14w2.

Gordon, Assa.—Mare, bay, 2 years, star on forehead, right hind leg white. T. Beatson, 36, 13, 33w1.

Innisfail, Alta.—Gelding, light bay, small, chunky, branded square with X. inside on left shoulder, and brand resembling running R. on left hip. L. Hornett, 18, 36, 28w4.

Lamerton, Alta.—Since last fall, mare, black, small, cropped ears, no brands; colt, yearling, black. Apply Wm. G. Hutchinson, J.P., Lamerton, Alta.

Millwood, Man.—One mare, bay, 2 years, about 1,200 lbs., Roman nose, stripe down forehead to nose, white spot on each side of lower lip, wild; mare, bay, 5 years, small star on forehead, white hind feet, ring bone on front feet; mare, huckskin, 2 years, grade Clyde or Shire, white stripe down face, white feet, black mane and tail, black line down hack. G. H. Bradshaw.

Riversdale, Assa.—Heifer, light red, little white on face, and on right flank, about 18 months. Wm. Rowland, 12, 21, 33w1.

Riversdale, Assa.—Since early in 1900, heifer, now about 2 years, red and white, silt in right ear; heifer, now about 2 years, red and white, white stripe in face, indistinct brand on left hip probably circle brand; heifer, now about 2 years, roan, end of left ear short, indistinct brand (probably circle brand) on left hip; heifer, now about 2 years, red, piece off right ear, indistinct brand (probably circle brand) on left hip; yearling, now about 15 months, brindle, white spot on forehead; heifer, about 2 years, red and white, white forehead, indistinct brand (probably circle brand) on left hip; steer, now about 20 months, red, white under forelegs, indistinct brand (probably circle brand) on left hip; heifer, now about 2½ years, roan, indistinct brand (probably circle brand) on left hip. Fred Lowe, S.W. 14, 21, 33w1.

Rosthern, Sask.—Mare, bay, small, about 5 years, branded H. S. on left shoulder; horse, brown, branded H. S. on left shoulder, 6 years; grey horse, 6 years, not branded. Cornelius F. Sawatzky, S.E. 30, 43, 5w3.

Saltcoats, Assa.—Since about middle of June, mare, about 7 years, light brown, white hind legs, about half way up, shod all round, white face, no brand, about 14½ hands. C. J. Hillman, 24, 24, 2w2.

Silton, Assa.—Mare, sorrel, white stripe on face, white right hind leg, branded 7 H.L. monogram on left shoulder; pony mare, bay, aged, black points, branded T. on right shoulder, and brand resembling J.A. on left shoulder. Chas. Dale, 26, 21, 22w2.

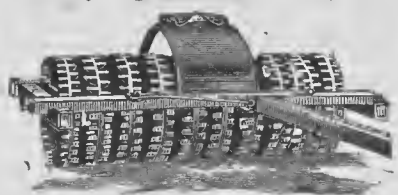
Star, Alta.—Muley heifer, black, left ear split, about 2 years, branded 3 Y.X. on left ribs. Allan Wilson, 8, 56, 19w4.

Wetaskiwin, Alta.—Heifer, red, 2 years, white face, indistinct brand on left side, split in left ear. James Jensen, S.W. 32, 46, 22w4.

Whitewood, Assa.—Since about July 15, yearling heifer, black, no brands. D. McPhail, 4, 17, 2w2.

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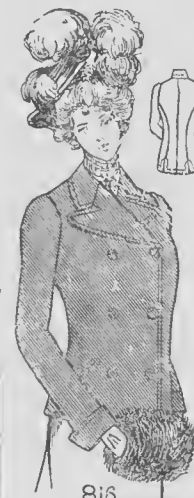
No. 826 — Nap, black or grey, low collar, 27 in. long, double breasted, unlined semi-fitting. Sizes 32 to 44. Price, \$4.75.

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Beaver Cloth, black or fawn, low collar, large pearl buttons, lined with mercerized sateen, 27 inches long, semi-fitting. Sizes 32 to 42. Price, \$7.50.



No. 816 — Heavy Melton Cloth, dark grey and fawn, low collar and cuffs, large bone buttons, 27 in. long, lined, semi-fitting. Sizes 32 to 40. Price, \$9.25.

Heavy brown mixture Tweed, large collar, double breasted, 27 inches long, lined, bone buttons, semi-fitting. Sizes 32 to 38. Price, \$10.00.

Beaver Cloth, navy blue and black, 27 in. long, low velvet collar, lined. Sizes 32 to 42. Very swell coat. Price, \$10.50.

Extra heavy curly cloth, black, large storm collar, large lapels, large pearl buttons, 27 inches long, semi-fitting, bell sleeves, lined. Sizes 32 to 44. Price, \$12.

Nigger Head Cloth, black, low collar, large lapels, bone buttons, semi-fitting, 36 inches long. Sizes 32 to 40. Price, \$12.50.



Black Curly Cloth, double breasted, 45 inches long, storm collar, bone buttons, lined, semi-fitting. Sizes 32 to 44. Price, \$7.75.

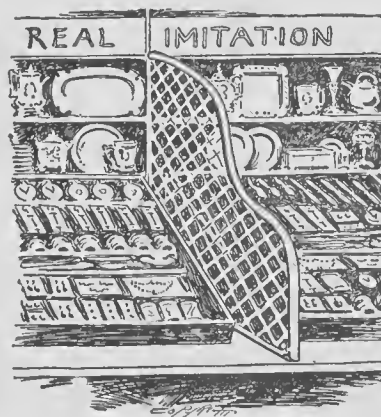
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Of course it is better in every instance to send the whole amount with your order, as you then save the sum the express company charge for returning your money to us—and you run no risk as your money will always be refunded providing the Jacket is not entirely satisfactory to you.

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Winnipeg, Sept. 5, 1901.

By the time this paper reaches its readers, wheat harvest will be practically over. It has on the whole been most favorable harvest weather, work has been delayed a little here and there by rain, but nothing serious at any place. Threshing returns show that the yield is not as heavy as expected, but there will be a big crop even with a considerable reduction. The settlement of the C. P. R. strike can have nothing but a beneficial effect for farmers, for had the strike continued it would be a most difficult thing to get all the wheat out of the country. It is going to be anyway, as the C. P. R. have now a very heavy traffic. The good crop prospect has quickened business all over and this in connection with the heavy immigration travel has given the railroad companies nearly all they can do. It is estimated that fully the 20,000 hands asked for have arrived in the province and still every day telegrams are received at Winnipeg asking for more men. When threshing begins in full earnest hands will be scarce enough. Wholesale houses in nearly all lines report business active. Bank clearings continue to show an increase over the corresponding week of last year, and the increase will begin to swell rapidly now that wheat is commencing to move.

Wheat.

The range of prices for wheat has perhaps never varied less over a whole season than it has done and seems likely to do this year. On Dec. 24, 1900, contract wheat at Chicago was 70c. In ten days it was 75c., with Fort William 1 hard 81c. On April 1 Chicago was 70c. and Fort William 80c. On July 5, with bright crop prospects, Chicago was down to 65c., Fort William about 76c. On August 5 Chicago was again at 70c. and Fort William 71c. To-day Chicago opened at 68c. for September, closing at 69c. Fort William to-day is about 69c. for cash wheat.

On the local market the various buyers are being organized by their employers for a very active season. A few sales have been reported at 60c. for 1 hard, but 58c. down to 55c., according to distance from Fort William, is the going figure. About 59c. to 60c. at Winnipeg is the quotation so far.

Winnipeg inspections for week ending Aug. 31 were as follows: 1 hard 42 cars, 2 hard 6, 3 hard 10; 1 northern 7, 2 northern 2, no grade 23, other grades 4; total 94 cars. Of this 50 cars were new. Of oats 18 cars 2 white, 3 feed, 2 no grade, total 23. No barley moving.

The option market has opened, but quietly so far. It is expected to prove a great convenience later on as dealers become familiar with its working. To-day the closing quotation for September options, Fort William, was 67c., and for October 67c.

The increase in the visible supply is 620,000 bushels.

Oats.

A few cars of new are coming in, but farmers are too busy to thresh oats at present. Besides, the high price for corn makes it quite certain that oats will easily maintain a high value throughout the season. The mills have been buying for a start, but such is the demand for feed that a good feed oat is worth as much at Winnipeg to-day as a No. 2 milling, 36c. on track being the quotation for both sorts. About 34 lbs. to the bushel is the weight so far.

Barley.

Nothing offering. About the same value as oats will be paid when it does move.

Corn.

This morning figures at Chicago were 54c., September closing at 55c. It was expected that the big rise engineered during the hot spell would give way as more satisfactory yields came to be reported, but there is little tendency to give way so far, and farmers are in no hurry to sell and so bring down the market.

Flour.

There is no change from last issue. Best patents \$2, second quality \$1.85, XXXX \$1.25.

Mill Feed.

The price of bran holds steady at \$12.50 per ton. Shorts are very scarce and prices hold at \$14.50 per ton.

Ground Feed.

Pure oat chop is selling at \$30 per ton here, delivered; while mixed barley and oats are not to be had. Corn chop is worth \$26.

Cattle.

As noted in last issue, cattle are slow in getting into that condition shippers like to see them in for the export trade. They are going forward by the train load now and good export steers are worth 3c. per pound off the cars here. Export cows bring 3c. Butchers' cattle run from 2c. to 3c. per pound.

Yearling stockers are worth at the point of shipment \$14 to \$16, and two-year-olds \$20 to \$22.

Owing to cattle being more plentiful dressed beef is a little lower than it has been for some time, the going price being 5c. to 6c.

Clay, Robinson & Co., the well known commission men of Chicago, send us the following:—"At this time, when you are looking for a market for your fat beefs, we call your attention to the trade at Chicago. We understand you have good grass and unusually good cattle, and with a strong demand for desirable beefs we confidently believe your steers would net you good returns at this point. Freight, feed and duty would cost you about \$1.40 to \$1.50 per cwt., and if your steers averaged 1,300 lbs. on the market, they should net you at home, figuring on a selling price of \$4.75 per cwt., practically \$45.00 per head. Last week we sold three loads of 1,448 lb. Northern Montanas at \$4.90; seven loads of 1,323 lb. steers of not more than good fair quality at \$4.50, and some 1,063 of 1,150 lb. cows at \$3.65 to \$4.10 per cwt. This is sufficient to show that good fat range cattle are in demand and with a prospect of but moderate supplies of corn cattle the coming two months, we look for a good market and strongly believe Canadian ranchmen should keep in touch with the trade here. As will be seen, the above Montana steers grossed \$71 and \$60 and the cows \$33 and \$47 per head, and our estimate of \$45 net for your cattle is therefore quite conservative."

Good as Chicago market is, it is not any better than the Canadian one, which gives us 3c. a pound here.

Sheep.

Choice mutton sheep bring 4c. to 4c. off the cars at Winnipeg. Lambs are worth 5c. a pound.

Hogs.

September is always a month of high prices for hogs and could the farmer have his hogs ready then he is sure of the top market. Owing to the scarcity of hogs prices have advanced 1c. a pound since our last report was issued. We quote choice bacon hogs off the cars at Winnipeg at 6c. to 6c. a pound. Inferior grades range from 5c. up.

Butter and Cheese.

Creamery.—The market is not in a very satisfactory state and there seems to be very little business doing and most of what is done is done for Montreal account. As high as 16c. is reported for a carload at point of shipment. The price ranges from 16c. to 16c. The Montreal market is weaker again. It does not look as though prices were going to reach a very high mark this fall.

Dairy.—Really good first-class fresh dairy butter is very scarce and would bring a good figure could it be obtained. That which is coming forward has been held for some time. Dealers are cautious about buying it and prices range from 10c. to 12c. delivered here on a commission basis.

Cheese.—Just at the present moment cheese is rather scarce and as high as 8c. a pound has been paid for it delivered in the city, but the general run is about 7c. a pound. It is thought that a considerable quantity is held by the makers.

Eggs.

The supply coming in is not large, but there has been no change in prices from the advance to 13c. quoted in last issue for the past week.

Hides.

The hide market is stronger. We quote No. 1 inspected hides at 6c. per pound flat, delivered here; No. 2, 5c.; No. 3, 4c.; sheep and lamb skins, 10c. to 35c.; calf skins, 8c. for No. 1 and 7c. for No. 2; horse hides, 50c. to \$1.25.

Wool.

Best Manitoba wool is worth 7c. a pound delivered here. In the Territories 7c. to 8c. is the going price for car lots.



As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on legal matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and facts stated clearly but briefly set forth.

ANSWERS TO QUESTIONS.

Running Water—Promissory Notes.

Enquirer, Wetaskiwin, Alta.: "1. Has my neighbor the right to stop the water running off my land through a bottom place toward a creek? Have I the right to deepen the place where the water runs or can I oblige my neighbor to make it deeper? 2. I enclose you copies of two notes. I would like to know if they are good before and after they come due."

Answer.—1. The right of drainage of surface water does not exist jure natura.
2. We see no reason why the notes should not be good. When due, sue for the debt evidenced by the notes.

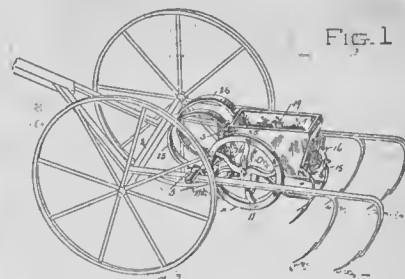
Dog Nuisance.

Subscriber, Pipestone, Man.: "Is it lawful for people to go around Sunday and Saturday pretending to kill foxes and allowing their dogs to kill turkeys and chickens when passing a farmer's place? How would it be if they lift them and take them with them?"

Answer.—1. We assume that you refer to domestic turkeys and chickens, in that case our answer is no.
2. It would hardly be right for the people to take such fowls so killed.

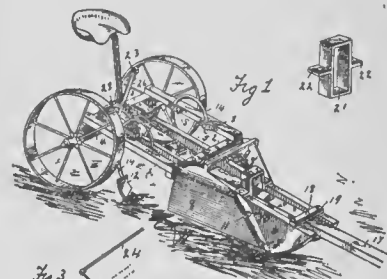
Patents of Interest.

Reported for The Nor-West Farmer by Marion & Marion, Patent Attorneys, Montreal, Quebec.



SEED PLANTER.

By Edward McCulloch, Mooreville, Texas, U.S.A.



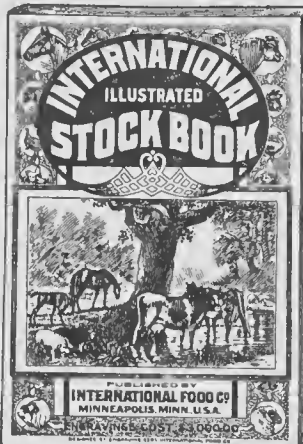
CULTIVATOR.

By William R. Salishury, Lamoni, U.S.A.

VINCENT & MACPHERSON,
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Rosser Ave. - BRANDON.

We have the best assorted stock of FURNITURE in the west. Write us for prices.

A \$3000.00 STOCK BOOK FREE



We will mail you a copy Free, POSTAGE PREPAID, if you write us and answer 3 questions: 1st—Did you ever use "International Stock Food" for Horses, Cattle, Sheep or Hogs? 2nd—How many head of stock do you own? 3rd—Name this paper.

This book contains 183 Large Colored Engravings of Horses, Cattle, Sheep, Hogs, Poultry, etc., with a description of the different breeds. The editor of this paper strongly endorses hook. It also contains a very fine illustration and valuable Veterinary Department. This engraving shows the beautiful design of outside cover which is printed in 6 brilliant colors. The size of this book is 9 1/2 by 6 1/2 inches, and the engravings cost us over \$3000.00.

WE WILL GIVE YOU \$14. WORTH OF "INTERNATIONAL STOCK FOOD" IF BOOK IS NOT AS STATED.

"International Stock Food" is a perfectly safe vegetable stimulating tonic and blood purifier. It fattens Cattle, Hogs, Sheep or Horses in 30 days less time and saves grain, because it greatly aids digestion and assimilation so that each animal obtains more nutrition from all grain eaten. It is extra good for stallions, brood mares, bulls, cows, rams and ewes, as it permanently strengthens and invigorates the entire system. 60,000 stockmen endorse it. Many use 2000 lbs. per year. It makes Colts, Calves, Lambs and Pigs grow very rapidly even in the winter, and only costs 1c 3 Feeds for One Cent. Guaranteed to make Hogs weigh 300 lbs. at 6 months, and to save your Hogs from Hog Cholera, because it is a peculiar stimulating tonic, blood purifier and general system strengthener.

"International Stock Food" won highest award and medal at Paris 1900. Your money will be refunded if it ever fails. Beware of inferior substitutes. OUR 20,000 DEALERS GIVE THIS BOOK FREE WITH "INTERNATIONAL STOCK FOOD" IN 25 LB. PAIL.

Largest Stock Food Factory in the World. Capital Paid in \$300,000.00. Write for Book to INTERNATIONAL FOOD CO., Minneapolis, Minn., U. S. A.

Our Stallions Buttonwood 2:17 by Nutwood (600) and International Stock Food by Hartford (574) eat "I. S. F." every day. We own the Big Horse that is 19 hands and weighs 2500 at 4 years. We own the Big Cow that is 6 feet tall, 13 feet long and weighed 2970 at 6 years. Our Big Short-Horn Steer weighed 3100 at 3 years. We have fed "International Stock Food" for years to our stallions, brood mares, colts, driving horses, work horses, cattle and hogs.

"International Stock Food" is harmless even if taken into the human system. We refer to this paper.

BUCKETS OF WORMS

Then Every Hog of a Car Load Gained 3 Lbs. Per Day For 60 Days. International Food Co., Minneapolis, Minn.

DEAR SIRS:—I have just fed "International Stock Food" to a car load of shoats and they made an average gain of 3 lbs. every day. "International Stock Food" beats all kinds that I have ever tried and I have fed several kinds. Hogs all around me were dying with Hog Cholera and I never lost a hog. After they commenced eating "International Stock Food" you could fill a bucket with worms that had passed from them. I think that my car load has made a wonderful gain by using your Food. Yours truly,

J. W. SHERRILL.



—While our columns are always open for the discussion of any relevant subject, we do not necessarily endorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give their names—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

A Bushel of Flax.

W. Cranston, Clearwater: "Please advise how many pounds of flax were required to the bushel in 1899 and if any change has been made since."

Answer.—This question brings up a rather interesting point in flax buying. Previous to 1899 fifty pounds was a legal bushel of flax in Canada. How that came to be fixed nobody can tell, but the effect was that when a deal was made by a man who knew his business he took care to state on the face of it that by a bushel he meant 56 lbs. The Department at Ottawa cannot explain how 50 lbs. got into the statute, but there it was for years, presumably as a clerical error, not detected at the time the statute was framed. In 1899 the legal standard was fixed at 56 lbs. to the bushel. We append the standard for quality of flax as fixed by the Grain Inspection Act—

No. 1 Manitoba flax seed shall be mature, and containing not more than ten per cent. of damaged seed, and weighing not less than 53 pounds to the bushel of commercially pure seed.

No. 2 Manitoba flax seed shall be mature, sound, dry and sweet, free from mustiness, and containing not more than twenty per cent. of damaged seed, and weighing not less than 50 pounds to the bushel.

All flax seed which is immature or musty, or which contains more than twenty per cent. of damaged seed, and which is not too damp or unfit for temporary storage, shall be graded as "rejected."

All flax seed which is warm, mouldy, very musty, too damp or unfit for temporary storage, shall be classed as "no grade" with the Inspector's notation as to quality and condition.

Local Prize Lists.

T. W. Knowles, Secretary of the Emerson Agricultural Society, writes: "I would like to exchange prize lists with secretaries of other societies in the west with a view to comparing their several ways of making up lists, regulations, etc. By so doing we might get new ideas and hints for our mutual benefit."

We very heartily approve of the idea and hope that secretaries all over the country will take it up this fall, for use next year.

How the Manitoba Farmer gets Rich and Pays Big Wages to Get Profit.

J. S. Craig, Portage la Prairie, Man.: "I would like to see or know how men coin wealth in Manitoba growing wheat. In my experience for the past ten years I have been as careful as I could be, and have sold wheat for as high as \$1.35 per bushel, and as low as 42c. In all cases it takes a long time to get rich, or even get rid of the grim wolf staring you out of the pantry. I came to Manitoba in 1885 and landed at Portage la Prairie and have been here ever since. I started farming on a rented farm in 1890, and remain a tenant still. Some farmers never keep track of how much they make, pay, owe, or have. I have, and the following are my expenses, receipts and profits for ten years, each year is from the first of January to the 31st of December.

Year.	Total Receipts.	Total Expenditure.	Profit.
1891	\$ 1,475.15	\$1,465.28	\$9.87
1892	1,830.62	1,830.28	.34
1893	2,143.43	2,142.37	1.06
1894	1,532.85	1,546.99	5.86
1895	1,901.38	1,874.62	26.76
1896	1,792.88	1,691.88	173.00
1897	2,169.74	2,047.21	122.53
1898	2,966.41	2,663.15	303.26
1899	2,810.15	2,761.48	48.67
1900	1,721.50	2,097.20	loss \$375.70

In counting up all the profit, it amounts to \$691.35, from this deduct the loss of last year, \$375.70, and you have a net profit of \$315.65. How's that for ten years' work of two men and six horses? Where does the getting rich come in? This year with the big shout about a heavy crop and because there's a lot of straw to handle harvest hands want \$2.00 a day, or \$45 to \$50 a month. I don't see where the riches come in at such wages. The figures I gave you from 1891 to 1900 I can vouch for and produce the papers if necessary. We get a living and three meals a day, that's all, so they do in the penitentiary."

Note.—We would like to hear the other side of the story from some of the men who have "coined" money growing wheat in Manitoba.

Stocking a Lake With Fish.

J. A. Reimer, Wetaskiwin, Alta.: "I have on my farm a lake covering about fifty acres and with water about eight feet deep. The bottom is solid clay, and the edges are grown with rushes. There is no running water in it, but the water never becomes green or offensive. There is at present no fish in it, but I would like to know if I might be able to keep fish in it, and, if so, from where could I get a commencement? What sort of fish would likely do the best, and would it be better to start with fish or with spawn? The ice on the lake generally freezes about three feet thick."

Answered by And. Halkett, Naturalist, Department of Marine and Fisheries.—This lake appears to be a very suitable place for the propagation of the common pike (*Esox lucius*, 2), which is such a voracious species that it is very unwise to introduce it into waters frequented by other useful kinds of fishes. Where it is intended to give it priority, however, a lake composed of pure water of medium depth, with an abundance of reeds, weeds, or rushes, would be an excellent place for pike. The character of the bottom, if quite pure, does not signify very much, as the pike is not a bottom feeder, but lies and lurks in cunning fashion for its prey. Slow moving waters are therefore better for the pike than currents and streams. He is carnivorous and devours fishes, frogs, ducklings, musk-rats, etc. The tenacity of the pike is so great that it has made its way into the fresh waters of Europe, Asia, and North America, and would therefore be an excellent fish to place in a lake previously uninhabited by fishes. But it would be also necessary to introduce some other kind or kinds of fish in order to give it a continuous supply of food. For this purpose I would suggest fishes of the Cyprinid sort, such as chub and suckers, and perhaps perch and in addition to this constant supply to keep throwing frogs and tadpoles into the lake. The best way would doubtless be to plentifully stock the lake, on a single occasion, with mature pike, but it would be well each season to continue placing the cyprinoids and perch in the lake until the results were experimentally determined. Of course if the conditions are at all favorable the pike would carry on their spawning habits in the spring of the year; and the chub, etc., would do the same, without, in great measure, being interfered with by the pike. The female pike is said to deposit as many as some 100,000 eggs, which, after fecundation, are hatched out in about 14 days time. When there is an abundant supply of food the pike is said to grow very rapidly. It is unwise, however, to attempt to propagate pike to any great extent unless in lakes of considerable dimensions, because they are so voracious that they keep preying on each other until only the largest and strongest survive. At certain seasons of the year the pike is an excellent food fish. As to the obtaining of the mature pike, they are of such wide distribution that there need be in that regard no great difficulty. It is extensively and generally distributed over North America.

Pan-American Prize List.

J. J. R., Wetaskiwin, Alta.: "Where can I get a copy of the prize lists of the Pan-American Exposition?"

Answer.—Address Frank A. Converse, Superintendent of Live Stock, Pan-American Exposition, Buffalo, N.Y.

Wants a Baby.

Subscriber, Alexander, Man.: "Could you please give me the address of an orphanage home for girls in Winnipeg?"

Answer.—Matron, Children's Home, Winnipeg, or Dr. E. A. Blakely, Secretary Children's Aid Society, Winnipeg.

Hessian Fly.

Jas. Hoey, Elton, Man.: "Please find enclosed joints of straw, in which you will find some insects which are doing considerable damage. I would like to know the name, life history, and best means for destroying this insect."

Answer.—The insects you sent are the pupa stage of the Hessian fly—the "flax seed" like things above the joints of the straw. This is the first report that we have heard of the presence of the insect this year. The following is a short sketch of the life history of the insect, given in The Farmer some years ago by Prof. Jas. Fletcher, Dominion Entomologist:—In Ontario and the Eastern Provinces, where fall wheat is grown, there are two broods of the Hessian fly in the year. The flies appearing in the autumn and laying their eggs on the young fall wheat. When the maggots hatch they work their way down to the bases of the shoots and destroy them close to the root. Then they change to the brown pupa-cases, which resemble a small elongated flax seed so closely that this condition has been termed "the flax seed stage." In this form the insect passes the winter and the flies emerge the following spring in time to lay their eggs on the leaves just about the time the stems are shooting. This summer brood attacks the straw, the maggots sucking the sap from the outside of the stem, but inside the leaf sheath at the very base where it joins the stem. Sometimes three or four maggots may be found at a single joint and the stem becomes so much weakened that in time it falls over, and very little further development takes place in the grain.

In Manitoba, where no fall grain is grown,

there is only one brood of the Hessian fly. Instead of the flies from the summer brood emerging in September, they do not appear until the following spring, the winter being passed in the flax seed state, either in the stubble left on the field or in the straw of the harvested crop.

Remedy.—In the west the remedy for this dire pest is comparatively simple and inexpensive. As the flies do not emerge until the spring, their destruction is largely in the hands of the wheat grower. All stubbles should be burnt over, and, if possible, plowed down as soon as possible after the grain is cut, for the reason that many of the insects are sometimes located higher up the stem than the two bottom joints all straw from infested fields should be either fed or burnt before seeding time the following spring. As many of the pupa-cases are dislodged when the grain is threshed, all screenings and rubbish from beneath the thresher should be destroyed.

Distinguishing Sex of Goslings.

H. B. C., Saskatoon, Sask.: "How can I distinguish the sex of goslings and at what age, also ducklings? Can goose eggs be successfully hatched by a hen and how many can an ordinary sized hen cover at one time?"

Answer.—There is great difficulty in distinguishing the sex of goslings and ducklings. It cannot be done satisfactorily until about five months old and the only way to do it then is to turn them up and examine the vent. Sometimes the voice will give an indication before this, but an examination by pressing with the fingers on either side of the vent is the safest way. An ordinary sized hen will cover about nine goose eggs and will hatch them just as well as the goose.

Our Yield of Wheat as Compared With English Averages.

Irene, Macgregor, Man.: "The big wheat crop that all the fuss was about has been mostly stacked except what is intended for stook threshing. The separator has begun to hum, which will be expanded into a full volume as September comes and wanes. But, alas! where is the 40 or 50 bushels per acre? At least not in this district, which will average a little more, if any, than 20 bushels. On foot and in stook the prospect to a superficial observer is very fine, and would be estimated at twice its value. No doubt it is a fine crop for this country and equal to the last two years' combined, but where farmers aim at a high average per acre, instead of so many acres of wheat, it would be a poor—very poor—crop indeed. When the crop report of England is given out the average sometimes goes above 30 bushels per acre, the average being about 29 bushels. The bushel there is 64 lbs., not 60 lbs., as here, and counted on the crops of previous 10 or 11 years. In looking over the list of returns for 11 years ended 1895, the lowest yield was in 1893—average 26.08 bushels. The highest, 1887, when it just fell short of 32 bushels, which gives a variation of only 6 bushels per acre. Here the variation is more than half the crop, which seems strange where there is a fertile soil and a beautiful climate. To state bluntly where the cause lies perhaps would not be etiquette, or rather not pleasing to most of your readers. I would like, at some future time, to compare the way farming is done in both countries and let the reader find the cause. Oats and barley give a low yield of very low grade compared to what both cereals are capable of producing."

Plow Manufacturer.

Subscriber, St. John, N.D.: "Would like to know the address of the inventor or manufacturer of the Hancock disc plow, of which a cut is given in The Nor-West Farmer of August 5th, 1901."

Answer.—Chattanooga Hancock Plow Co., Chattanooga, Tenn., U.S.A.

Experience with Manitoba Cement.

In answer to a Reader, Starbuck, who enquires in last issue about experience with Manitoba cement, we are pleased to give the following letter from the Winnipeg Elevator Co., Ltd., who have been using the cement made at Arnold by the Manitoba Union Mining Co.:—

"We have used Manitoba cement in putting in concrete foundations in elevators constructed at Pense and Weyburn in N.W. T., also at Fannystelle and Swan Lake, in Manitoba. The first two gave us the greatest possible satisfaction; but our elevator foreman some days ago claimed that the cement shipped to us for Fannystelle and Swan Lake was not so good as we had received for the other two places. However, since we have received a letter from him saying that he was mistaken—that he had built a little too soon on the concrete and it had since become perfectly hard and was equally as good as the first—he had not permitted it to set properly. He claims to be more than pleased with the result and we intend using it right along in foundations in our elevator construction, and expect to use a good deal of it yet this present fall. We are only too pleased to be able to speak highly of it—its price being so favorable compared with Portland cement."

Work! work so that you may have a capacity for work.



Wholesome Advice

For People Whose Stomachs are Weak and Digestion Poor.

Dr. Harlandson, whose opinion in diseases is worthy of attention, says when a man or woman comes to me complaining of indigestion, loss of appetite, sour stomach, belching, sour watery rising, headaches, sleeplessness, lack of ambition and a general run down nervous condition I advise them to take after each meal one or two of Stuart's Dyspepsia Tablets, allowing the tablet to dissolve in the mouth, and thus mingle with the food eaten. The result is that the food is speedily digested before it has time to sour and ferment. These tablets will digest the food anyway whether the stomach wants to or not, because they contain harmless digestive principles, vegetable essences, pepsin and Golden Seal which supply just what the weak stomach lacks.

I have advised the tablets with great success, both in curing indigestion and to build up the tissues, increasing flesh in thin nervous patients, whose real trouble was dyspepsia and as soon as the stomach was put to rights they did not know what sickness was.

A fifty cent package of Stuart's Dyspepsia Tablets can be bought at any drug store, and as they are not a secret patent medicine, they can be used as often as desired with full assurance that they contain nothing harmful in the slightest degree; on the contrary, anyone whose stomach is at all deranged will find great benefit from the use of Stuart's Dyspepsia Tablets. They will cure any form of stomach weakness or disease except cancer of the stomach.

SOMERVILLE & CO.

STEAM

Marble and Granite Works

Dealers in
Marble and Manitoba Granite

Monuments,
Headstones,
Mantelpieces,
Cemetery Fencing,
Tablets, etc.

Rosser Ave., Brandon.

Represented by

W. Somerville, W. C. Stewart,
A. W. Thomson, E. Patterson.

When writing, mention The Farmer.

USE THE ALL-WOOL AND ONLY GENUINE

MICA FELTING

Feb. 26th, 1901.

To W. G. Fonseca: I have had my new office covered with the "All-Wool Mica Roofing," and used considerable of it on other buildings. I believe it to be a substantial and reliable material, which neither heat nor cold affects. I can safely recommend it. (Sgd.) D. E. SPRAGUE.

MARRIAGE LICENSES ISSUED.

W. G. FONSECA, 705 Main St., Winnipeg.

When writing, please mention this paper.

FARM IMPLEMENTS

A new warehouse is being built at Hilton, Man., by R. Stone, implement dealer.

There are six implement dealers in Innisfail, Alta., this year as against three last year.

There is a big demand throughout the country for farm wagons and dealers are finding it difficult to get supplies owing to slow deliveries from the factories.

Threshing machine men have done a big business this year and have had to turn down orders because they could not get machines fast enough or enough of them.

Archie Watson, of The John Watson Mfg. Co., Ayer, Ont., is out on his fall trip, taking in the Canadian Northern to Brandon, then up to Rapid City and on to Yorkton. He is expected home again this week.

H. W. Grimwood, secretary of the American Cordage Association, says that the present capacity of the cordage factories in the U. S. is 30 per cent. in excess of the consumption and that competition is very keen among manufacturers.

Thos. Rooney, of the Minneapolis Threshing Machine Co., reports that the demand for their goods this year has been extremely good, they having sold out everything they had in stock and are now shipping direct from their factory at Hopkins, Minn.

The following agents of the Canadian Moline Plow Co. paid the head office at Winnipeg a visit this week: Jos. Winram, Pilot Mound; Geo. Winram, Killarney; A. E. May, Carberry; C. Drummond-Hay, Belmont; Chas. Wahn, Gretna; and W. J. Dolg, Russell.

L. Harsthorpe, of the John Ahell Co., reports that their business this year has far exceeded their expectations, they having sold all the threshing outfits that their factory has been able to turn out. They hope with increased capacity to be in a position to meet all demands for the next season.

Most of the cream separators on the market nowadays have reached an advanced stage of mechanical perfection. One dealer tells us that during the past three years he has only needed to order one repair, although over thirty machines of his selling have been in constant use.

The Warder, Bushnell & Glessner Co., manufacturers of Champion harvesting machines, report a large and satisfactory business in Manitoba and the Territories during the present harvest. The draw cut mower and the force feed binder are no longer new to the agriculturists of Canada.

At a meeting of the directors of the Brandon Binder Twine Company held recently, the following officers were elected: President—J. Hanbury; Vice-President—N. Wolverson; Sec.-Treas.—E. L. Christie. The directors intend to commence work on the new factory at an early date and have everything in readiness to start this fall. See advt. in this issue.

Theo. Starks, general manager of the Moline Plow Co., Moline, Ill., accompanied by Mrs. Starks, paid a visit to the Canadian Moline Plow Co., Winnipeg, this week. Mr. Starks is very favorably impressed with Manitoba and expects to take a trip as far west as Calgary to satisfy himself that the reports about the big crops in Manitoba and the Northwest are true.

At a meeting of the Northwestern Plow and Implement Association, held in Chicago on Aug. 20, it was decided on an advance of 10 per cent. on prices on the entire list of implements made by the members of the concern for the spring trade. This includes plows, harrows, disc harrows, cultivators, seeders, etc. The reason given for an advance is the increased cost of the material used in manufacturing.

Messrs. Joseph Maw & Co., Winnipeg, the owners for the Dominion of the Maw-Hancock Disc Plow, are impressed with the volume of correspondence growing out of the reports of the recent tests which have appeared in The Nor-West Farmer, and express much satisfaction over this added proof that the paper is widely read. An illustration of the plow appears in this issue on the back cover.

B. E. Swart, general representative of the De Laval Separator Co., who has just returned from a trip of several weeks in Northern Manitoba and Assiniboia, reports a good business. In his opinion the interest in dairying is increasing, and a majority of the farmers are beginning to think that mixed farming is more profitable than relying solely on a grain crop. He also holds the opinion that the good crop this year will be the means of larger sales of cream separators another season.

The fire that occurred at the factory of the Fish Bros. Wagon Co., Racine, Wis., was by no means of as serious a nature as the daily papers throughout the country wrote it up, and we are able to inform the trade and the many customers and friends of the Fish Bros. Wagon Co. as to the exact nature of the fire, and the slight damage that was sustained, having received reliable information regarding it. The fire occurred in a small two-story frame building that was situated quite a distance from the main buildings of the plant, which are entirely of brick and fire proof. The building was not used for manufacturing, hut to store gears and parts of spring wagons that the company have discontinued making. The fire caught in the second story and partially burned half of the building and the old spring wagon gears,

and a few hodies that were contained in it. It did not burn any material used in the construction of a farm wagon, and consequently the running of the plant, filling orders, etc., was not delayed even one day. The loss was reported by the newspapers as exceedingly high, while in reality it was small and fully covered by insurance. The fire was of small consequence, and not, as some of the Fish Bros. Wagon Co.'s competitors have been telling the trade, of a serious nature, and as one or two of the wagon companies have intimated that it burned up the whole plant, instead of, as is the case, burning a small part of an old shed that was not used in the construction of wagons. They are prepared to-day, as before, to fill all orders promptly. The Canadian Moline Plow Co., Winnipeg, handle these goods in the west.



Need of a "Sunshine" Furnace.

When the price of coal goes this high the need of an economical furnace is felt.

The "SUNSHINE" is the result of half a century of furnace-study, and embodies every fuel-saving device that long experience and modern ingenuity can think out.

Every square-inch from bottom of fire-pot to top of dome is a direct radiating surface.

Made in three sizes.

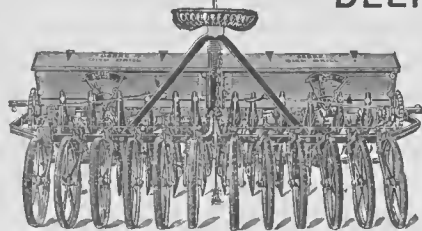
Burns coal, coke or wood.

Our local agent or nearest house will send descriptive pamphlets free to any address.

McClary Manufacturing Co.
LONDON, TORONTO, MONTREAL, WINNIPEG,
VANCOUVER, & ST JOHN N.B.

Two Machines in One!!

DEERE DISC DRILL
DEERE DISC HARROW.



When through drilling, simply remove drill attachment and you have the best Disc Harrow made. Two tools for little more than the usual price of one.

Can't be Beat
as a Drill or Harrow.

MANUFACTURED BY DEERE & MANSUR CO., MOLINE, ILL., U.S.A.

The Fairchild Co. Ltd. GENERAL AGENTS FOR MANITOBA. **Winnipeg.**

SHIPPERS OF BUTTER AND EGGS.

To the Winnipeg market, will do well to remember us, as we are the largest handlers of above lines in the Canadian Northwest.

References; Any Bank or Wholesale House in Winnipeg. Correspondence solicited.

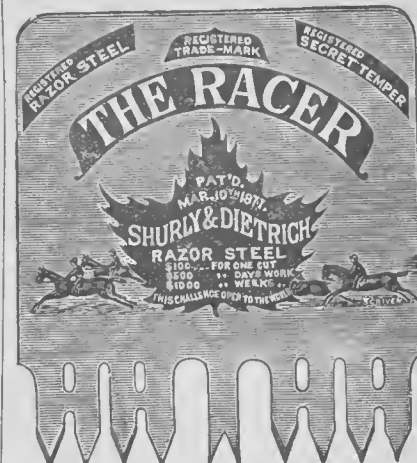
FINEST COLD STORAGE PLANT WEST OF TORONTO.

Office: 147 Bannatyne Ave., East.
Packing House; Louise Bridge.

J. Y. GRIFFIN & CO.,
Pork Packers & Commission Merchants, Winnipeg

THE RAZOR STEEL Saw

Secret-Temper Cross-Cut



We take pleasure in offering to the public a saw manufactured of the finest quality of steel and a temper which toughens and refines the steel, gives a keener cutting edge and holds it longer than by any process known. A saw, to cut fast, "must hold a keen cutting edge."

This secret process of temper is known and used only by ourselves.

These saws are elliptic ground thin back, requiring less set than any saw now made—perfect taper from tooth to back.

Now we ask you, when you go to buy a saw, to ask for the Maple-Leaf, Razor-Steel, Secret-Temper Saw, and if you are told that some other saw is as good, ask your merchant to let you take them both home and try them, and keep the one you like the best.

Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

It does not pay to buy a saw for one dollar less and lose 25c. a day in labor. Your saw must hold a keen edge to do a large day's work.

Thousands of these saws are shipped to the United States, and sold at a higher price than the best American saws.

Manufactured only by
SHURLY & DIETRICH
Maple Leaf Saw Works,
GALT, ONT.

'LAP-SEAL' IMPROVED ASBESTOS ROOFING

is Reliable, Durable
and Economical.

"LAP-SEAL" IMPROVED ASBESTOS ROOFING, price per square, complete . . . \$4.50

With each square of roofing we furnish 1½ gals. of "Lap-Seal" Roof Coating and 1 lb. of nails.

"GIANT" ASBESTOS ROOFING, 3-ply, price per square, complete . . . \$3.50

We furnish with this roofing the same Red Asbestos Coating as with our "Lap-Seal" roofing which adds greatly to its wearing qualities. It is put up in rolls of 18 square feet, 32 inches wide, enough to cover one square 10 x 10 feet. Each square includes 1 lb. of nails and 1½ lbs. tin caps.

"BLACK JACK" ROOFING, 3-ply, price per square, complete . . . \$3.00

We furnish with it 2 gallons per square of our Asbestos Roof Coating (black) 1 lb. of nails and 1½ lbs. of tin caps.

Liberal Discounts to large buyers.

ROBT. BLACK, 131 Bannatyne St. WINNIPEG.



Fall Fairs.

Pincher Creek	Sept. 9.
London, Ont.	Sept. 13 to 21.
Ft. Francis	Sept. 13.
Médecine Hat	Sept. 18 to 19.
Broadview	Sept. 19.
Maple Creek	Sept. 23-24.
Churchbridge	Sept. 25.
Little Cut Arm & Qu'Appelle	Sept. 25.
South Saskatchewan, at St. Louis	Sept. 25.
Innisfail	Sept. 26.
Emerson	Sept. 24 and 25.
Balfour	Sept. 26 and 27.
Kinistino (Carrot River)	Sept. 27.
Logherg (Rathbury and Logberg)	Sept. 27.
Carlyle	Sept. 28.
Fort Saskatchewan	Sept. 28.
Strathcona	*Sept. 30 or Oct. 1.
Salcoats	Oct. 1.
Macgregor	Oct. 1 and 2.
Victoria (B. C. Provincial)	Oct. 1 to 5.
Alameda	Oct. 2.
Hartney	Oct. 2.
Headingley	Oct. 2.
Moose Jaw	Oct. 2.
Olds	Oct. 2.
Russell	Oct. 2.
St. Andrews	Oct. 2-3.
Rosthern	Oct. 3.
Swan Lake	Oct. 3.
Swan River	Oct. 3 and 4.
Carnduff	Oct. 4.
Gainshoro	Oct. 5.
Kildonan	Oct. 8-9.
Elkhorn	Oct. 9 and 10.
Killarney	Oct. 9 and 10.
Rockwood (Stonewall)	Oct. 9 and 10.
Gladstone	Oct. 10.
Lacombe (Fall Fair)	Oct. 18.
Oak Lake	Oct. 18.

*Approximately.

STRATHCLAIR.

This fair was held on August 16th and was a decided success. Winners of first prizes for agricultural horses were J. M. Geekie, R. Leeson and J. McKay. For general purpose horses, E. Manley, J. S. Boughton, C. Glenn. For carriage and road horses, H. Roberts, D. McKerchar, A. R. Sutherland, W. Campbell, N. Morrison, R. Hogarth and A. McLean. For horsemanship Miss McLean, J. Bacon and H. Grassie.

In cattle the winners for Shorthorns were W. Campbell and E. Burnell. For grades M. Harrison, E. Burnell and W. Weatherstone. E. Campbell had a fine lot of Berkshire pigs. In grain the winner for Red Fyfe was C. Glenn; for White Fyfe, J. McKay; for oats, D. McKerchar; for barley, Mrs. Finnie.

Plant Breeding.

Our space in last issue was too crowded to admit of justice being done to the whole of Prof. Hays' paper. We therefore take it up again.

EXAMPLES OF RESULTS OF BREEDING.

Three illustrations from plant breeding and from animal breeding, in which the general principles are the same, will suffice to emphasize the simpler side of the question of improving our useful plants:

1. The Wealthy Apple.—Peter M. Gideon was a plodding enthusiast who some quarter of a century ago was working with little apparent success to acclimate seedlings and cuttings from the hardiest eastern trees. Thousands of trees annually went to the rubbish heap. At last one promising seedling came and all the failures were more than atoned for. He called it the Wealthy and it has been worth uncounted thousands to the State of Minnesota alone. He raised a few more and his success stimulated other workers, who have reaped their own share of reward. It may be a long time till another as good or better turns up, but patient workers are still on the trail.

2. The Race Horse Messenger.—Messenger, an imported English race horse, which became the leading progenitor of the American race of trotting horses, will serve as the second illustration. In nearly if not quite all of the best individuals of this great breed there is some of the blood of this horse, famous, not for his individual performance, but because of his power to transmit to so great a progeny the ability to win trotting races. This ability to trot is made up of many correlated elements, such as the instinct to contest the race, the form of body which permits light and free action, the texture of every bone, fibre, and nerve, and the teachable nature which enables the trainer to educate the horse. A combination of all these characteristics was given to this race of horses by the parent horse. Many other running horses have been employed in efforts to produce a competing strain of trotters. But the blood of Messenger stands above them all. And his descendants, through rigid selection extensively practiced, are gaining in trotting ability from year to year. He was a chance discovery. With the element of variation once in hand, the horsemen of America have gone on improving and intensifying it and reducing the American trotters to a uniformly fast-trotting race of animals.

3. Minnesota No. 169 Wheat.—One of the varieties of wheat originated by the Minne-

sota experiment station will serve as the third example. This wheat, mentioned on a previous page, was originated from a single plant (No. 476, of 1892) in the following manner: Several of the best plants were chosen from among 400 plants of Blue Stem, each growing separately, a foot apart each way. Each of the selected plants yielded 500 or more grains of wheat weighing 10 or more grams. The seeds from each chosen plant were planted for a few years until sufficient seed was obtained to plant a field plot. Then for several years each of the new strains was grown in a field beside the parent variety from which the 400 original seeds were chosen. A few of the new strains proved superior to the parent variety, but the one named Minnesota No. 169 stood out so preeminently superior that all others were discarded. For a large area of Minnesota this wheat seems capable of yielding at least 1 or 2 bushels per acre more grain than its parent variety, which is the best kind commonly and almost universally found on the farms in southern and central Minnesota. This variety in ten years could be increased so as to almost displace the parent wheat. The peculiar quality or power in the single germ which was the parent of plant No. 476 in our field crop nursery in 1892 had a very great value. The system which was followed to find the germ of greatest value is comparatively simple. The cost of finding this plant and of developing a variety of wheat from it, including the cost of forming and testing all the strains which failed to reach first place, was probably not one-thousandth of the value of this new wheat. The production of this and other similarly useful new varieties gives courage to experimenters, and warrants the State in investing more money in similar experimentation with wheat and other important crops.

THE SECRET OF SUCCESS.

The English breeder of hounds when asked the secret of his success, said "I breed many and I hang many." In most cases he could not determine the value of the blood of a certain sire or dam until he had numbers of his or her progeny. Not infrequently the blood of a certain animal or plant is unappreciated until, after its death, successive generations have shown the peculiar power of its "blood" to transmit valued characteristics. Messenger is appreciated more by horsemen every year. The peculiar value of the Blue Stem wheat plant, No. 476 of 1892, was not generally known until the several strains of wheat from the various wheat plants had been grown in the field trials for some years, and until the one springing from this plant had outstripped all the others as a valuable variety for practical planting in several States. Peter M. Gideon dug up many thousands of apple seedlings, and yet he is regarded as peculiarly fortunate in securing such a large proportion of valuable apple varieties from his extensive plantations of seedlings.

Luther Burbank, of California, in his work in producing new forms of valuable fruits and flowers, digs up and throws away annually acres of plants in his endeavors to find the one plant in many thousands from which he can produce a new variety with higher economic value or artistic qualities. The Garton Brothers, of England, in producing their new forms of cereal, forage and root crops, have dealt with very large numbers of individual plants. The breeders of sugar beets analyze annually millions of sugar-beet roots, one firm alone employing 200 people in this work for two months each year, that the "blood" of the comparatively few best mother plants may be incorporated into new strains and varieties.

Cruikshank, the originator of the famous family of Shorthorn cattle known by his name, annually had under his eye very many of the finest Shorthorns of the British Islands, and with wonderful skill brought into his barns those very best animals which would most effectively centre the blood of the best meat-producing quality of the whole breed into one herd. His philosophy, his artistic skill, his business ability, his far-seeing patience, and his long life resulted in his forming a shire of meaty Shorthorns which has made him famous and has produced great wealth for growers of cattle and users of meat.

Wheat, in addition to the advantage of using immense numbers at a small cost, has many other characteristics valuable to the student of breeding and heredity. Field varieties may be developed from each of the several best stocks, and these, at a reasonable expense, may be tested in field trials as to yield and also as to their milling properties. Moreover, the seeds may be preserved for a number of years, so that the original variety may be grown and compared with progeny which has been bred for a series of years.

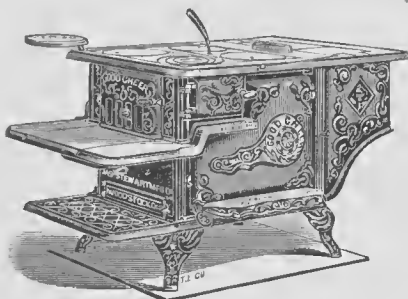
The value of new sorts cannot be ascertained in a year or two. Bromus Inermis, the Hungarian brome, took very poorly to the climate of the northern States, but much more readily at Indian Head, from which it spread rapidly in the northwest, and is slowly going south in the States.

Professor Hays goes on to show the part played by selection from the multitudinous plants bred. He also shows how Quetelet's law of averages works when applied to plant breeding. Random breeding by amateurs may lead now and then to gratifying results, but systematic hybridizing by experts holds out much greater hope for the future.

Toward the close of his paper Professor Hays explains and illustrates by diagrams his methods as followed at the Minnesota Station by himself and the students who aid in the work. We have no room for further extracts now, but strongly urge every student of the laws of plant life to get hold of the bulletin and give it careful reading next winter.

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Clover Growing in Alberta.

It may be said that up to the present the clovers have practically been an untested crop in Alberta. In many places a few seeds accidentally dropped have grown and spread, and some small patches have resulted; but very few, if any, systematic attempts have ever been made to see just how far this crop can profitably be grown in that territory.

From personal observations which we have made, and information which we have collected at one time and another, we feel rather confident that a very great deal more success might be attained in clover growing in Northern Alberta than most of the farmers there suppose. The writer has been considerably interested to see the exceedingly vigorous way in which the white clover has taken hold and spread in every spot where an accidental seed has fallen. The alsike is not so generally met with, but we have seen a few magnificent single plants and some good patches of this species. In one plant recently shown us by Mr. A. Waterston, of Wetaskiwin, we counted 36 large stalks, averaging about four feet each. There seems to be very good reason to suppose that alsike would prove quite a successful crop, as we know of small patches where it has now been living for many years. A few stray strong plants of red clover have been observed here and there, but we have never seen enough of it growing together to indicate aggressiveness, and our forecast is that it would largely kill out except in such places as might be sheltered or likely to be covered with snow in the winter. Alfalfa has been very slightly experimented with, and the results have been somewhat erratic. The quality of the subsoil affects this plant very much, and it may yet be found to be satisfactory upon some sorts of soils.

The advantages of being able to raise crops of clover are greater than most of the farmers of this country as yet realize; and we should like to see careful tests as to its adaptability made in every part of the west where it is at all likely to succeed. In the eastern provinces, where it is now necessary that farmers calculate carefully in order to maintain soil fertility, the great benefits of clover growing are fast becoming more clearly recognized. According to recent experiments conducted by Professor Shutt, of Ottawa, a vigorous crop of clover will take from the air (and if plowed under will contribute to the soil) more nitrogen than is contained in ten tons of barnyard manure. It will also render available as much potash and almost as much phosphoric acid as the amount of barnyard manure named. There is no doubt that if clovers could be grown satisfactorily enough in Manitoba, some of our lighter soils would already very markedly show the benefits of turning down an occasional clover sod or crop of clover. But while this feature of the question may not as yet appeal to the Alberta farmer, he would easily find a small patch of clover of value for hog pasture, or to grow some choice hay for his calves or sheep—if he chanced to have the latter; and at the same time he would be performing an experiment the value of which, if successful, he would realize very much more fully in later years.

The Farmer would like to receive the names of about twenty-five farmers in Alberta and Saskatchewan who will volunteer to send in an application before the new year to the Central Experimental Farm at Ottawa for free samples of clover seed, and thus make a careful test of the adaptability to the climate and conditions in those Territories of the four sorts of clovers named, letting us know from year to year how the plots succeed. The experiment will be an interesting and valuable one. We would also like to hear during the winter from any farmers who have already made any tests along this line.

The Dominion Elevator Co. proposes, we understand, to build an elevator at Hartney.

Uphill or Down.

Professor Hays in his paper on plant breeding points out that one of the difficulties of acclimating foreign seeds is that the tests made in the first years are far from conclusive. A variety may look very promising for a year or two and then gradually dwindle into unprofitableness. Or it may be all the other way. Brome grass has been tried in a good many of the States, sometimes making a dead failure, sometimes a doubtful success. Even at Brandon, where it now gives perfect satisfaction, it was rather slow to find favor. But it took to Indian Head almost from the first, and from there has made its way all over the Northwest with unvarying success. It is for the Territories the discovery of the period, every one swears by it, and in last issue of The Farmer we stated that on 40 acres of the Waldron ranch in Alberta three cattle had been fed all the season on every acre, both stock and pasture doing well. This is partly due to the special excellence of the season, but in the main it is a striking testimony to the adaptation of brome grass to the Northwest. It has since been found to do well in States further south, where at first it was accounted almost a total failure.

Mr. Mackay has recently drawn attention to the great improvement made on Banner oats since they were introduced at Indian Head. They began at about 34 lbs. to the bushel, he sent them to Glasgow Exhibition weighing 45. They showed so well that a large miller offered to place an order for 100,000 bushels of them. Mr. Mackay says that if justice is done them by putting them on good well worked land anyone can grow them as good as his sample. Just now the other men are working to set their oats on the down grade as to yield and quality, while he is working in the other direction.

The Americans down Kansas way think they have hit a grand thing in Kubanka wheat. It is a capital variety in Russia, with flinty quality. It made a poor showing with us when introduced at Kinalmeaky farm and elsewhere, but got run down till fit only for chicken feed. It will be curious if by going farther south it makes a different reputation. We think it will not.

There have been several of the best varieties of British grain and potatoes tried here, but so far with no advantage whatever. They seem to run down in our soil and climate, while home-bred varieties keep up to the mark.

Iowa State Fair.

The fair just ended is the 47th held by the State and is now a pretty big thing. There were present 680 cattle, representing 65 herds; 1,360 swine and 190 horses. Fruit is a very big display, one man setting out 500 plates. A rancher from an Indian reserve in South Dakota shows a big steer by a buffalo bull out of a Polled Angus cow. He is 7 years old and weighs nearly 4,000 pounds; length 16 feet; height, 6 feet; spread of hips, 42 inches; girth, 11 feet 7 inches.

The La Riviere Farmers' Elevator Co., Ltd., is the name of a new elevator company being organized at La Riviere, Man. The capital stock is \$5,000, of 100 shares at \$50 each.

The success that has attended the growing of beets has led American capitalists, who have had experience with sugar beets in Utah, to look into the possibilities of Southern Alberta as a suitable field to exploit. A Mr. Jesse Knight, of Salt Lake City, is reported to have purchased a large tract of land and is getting it ready for crop. He intends to try sugar beets, bringing in settlers from Utah to grow them. If the plan works out all right Mr. Knight expects to have a beet sugar factory ready for operation by the fall of 1903.

Harvest Notes.

J. P. Craig, Glenboro, is said to have one of the heaviest crops of wheat in the province.

J. L. Graham, Melita, with his binder and three-horse team, cut 90 acres of heavy, ripe wheat in three and a half days.

The Crystal City Courier states that W. H. McKittrick, of that district, has a binder that he has used for eighteen years and the repairs on which for that period have only cost \$1.10.

Mr. Abrahamson, of Percival, has the honor of delivering the first load of this year's wheat at Whitewood. The sample was good No. 1 hard and weighed 63 lbs. to the bushel.

W. Cooke, of Orangeville, Assa., cut a field of twenty-two acres of wheat last week which required four and a half pounds of twine per acre. This is only a sample of the heavy yield of wheat in the district.

An Ontario harvester who became tired of his job, when asked what he came to this country for, said: "I came to this country for a change and a rest and the hotel got the change and my employer the rest."

J. B. Bowness, whose farm is one mile west of Saltcoats, has just finished cutting one of the heaviest crops of oats ever seen in the district. One measured five acre field took 35 pounds of twine to tie it, and Mr. Bowness states that the balance of his crop is equally as good. Next?

Secretary of Agriculture Wilson says that the U. S. are succeeding admirably in the production of tea, and he says it won't be long until they produce all the tea demanded by the country.

The Farmers' elevator at Deloraine, just completed, is regarded by its owner as one of the best elevators in the province, and in this busy season, if well handled, should do a rushing business.

The directors of the Winnipeg General Hospital have been notified by Mayor Howden, of Neepawa, of a legacy of \$590 from the late Robt. McMurray, of Rosedale municipality. Mr. McMurray had received treatment at the hospital on several occasions and showed his appreciation of the benefits of the institution in the way mentioned.

Walkerton, Ontario, people seem to be very progressive. Not satisfied with a pork packing establishment and a binder twine factory, they now want a beet sugar one. It is said that a proposed company has arranged with farmers in the vicinity to grow 2,500 acres of sugar beets next year. It is claimed that the soil around this progressive town is peculiarly fitted for growing sugar beets of a high quality.

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STORY OF HER SUCCESS



A portion of her letter reads as follows: "My father had often promised mother to stop drinking, and would do so for a time, but then returned to it stronger than ever. One day, after a terrible spree, he said to us: 'It's no use. I can't stop drinking.' Our hearts seemed to turn to stone, and we decided to try the Tasteless Samaria Prescription, which we had read about in the papers. We gave him the remedy, entirely without his knowledge, in his tea, coffee, or food regularly, according to directions, and he never knew he was taking it. One package removed all his desire for liquor, and he says it is now distasteful to him. His health and appetite are also wonderfully improved, and no one would know him for the same man. It is now fifteen months since we gave it to him and we feel sure that the change is for good. Please send me one of your little books, as I want to give it to a friend."

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Write for Price List.

45,000 TREES

20,000 Petrofsky Russian Poplar
10,000 Wobstii Russian Poplar
5,000 Russian Golden Willow
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We are offering the above quantity of beautiful young trees, well rooted, about three feet high, for next fall and spring delivery, besides a good stock of small fruits, flowering shrubs, Virginia Creeper, etc. This is the largest and finest lot of Russian stock ever offered in the west. Send for descriptive price list to

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Manitoba Apples.

In the window of Robinson & Company's store, Main street, Winnipeg, M. Bartlett, secretary of the Western Horticultural Society, exhibited for some days a collection of Manitoba fruits that was to all but the very few who have been following the progress of fruit acclimation in the west, a very decided surprise. The apples are the best and the varieties more numerous than has ever been before approached in our climate. A. P. Stevenson, of Nelson, has the largest lot. They are far beyond in both quality and variety what the most sanguine experimenter could up to the present time have looked for. The Russian Gravenstein is a large and showy apple. There are about thirty other varieties of apples and crabs shown by Mr. Stevenson. Among those of large size and fine quality are Blush Calville, Ostrakoff, Simbrisk No. 1, Anisette, White Rubits, Saccharine, Wealthy and Hibernial may be named. Several choice varieties of crabs are also shown from the same garden. Messrs. Lyall and Cadham, Portage la Prairie, show Duchess of Oldenburg and other varieties of apples and crabs. From the garden of Archbishop Machray, at St. John's, some fine fruit is shown. Thos. Frankland, Stonewall, has a good many varieties of apples, crabs and seedling p'ums. Several other growers contribute to this very interesting collection.

Show at Brandon.

The fourth annual show of the Brandon Horticultural Society was opened on August 22nd. The opera house was filled with a splendid display of the floral and vegetable produce of the town and vicinity. A fine exhibit of fruit was sent in from British Columbia. Another choice lot came from A. P. Stevenson, Nelson. H. L. Patmore and the Experimental Farm also showed collections of fruit. Messrs. H. L. Patmore, F. Mansoff and H. Noonan showed large and beautiful stands of flowers and vegetables in the professional class. These collections included some very choice varieties and drew well deserved approbation.

The Experimental Farm had a profuse display of flowers and vegetables, including 100 varieties of potatoes. G. R. Caldwell had a splendid collection of sweet peas, gladioli, etc., and D. H. Scott was another liberal contributor. There was an excellent all-round display from individual competitors, and altogether the western capital has good reason to be proud of the floral and horticultural skill of its citizens. There was also a contest for best kept gardens and grounds, Senator Kirchhoffer coming in first with 89 points, G. R. Caldwell 61. For smaller lots, H. Tooke and J. Rigg scored. In the farmers' class, H. Nichol was 1st, J. Henderson 2nd, and J. Ramshaw 3rd. There was also a fine collection of preserves. Besides the show, a very good promenade concert was provided by the musical talent of the city. Altogether this show was a very gratifying success.

At Wetaskiwin, Alta., one of our representatives recently measured a growth of this season of over six feet on an ash-leaved maple.

One of our staff was recently shown through an Alberta flower garden in which a number of vigorous plants of stink weed were being cultivated in mistake for tame flowers. Needless to say, the plants were thriving. There is still room for much more education on the weed question.

Horticulture at Regina.

At a large and representative meeting held at Regina it was decided to form a horticultural society to be called the "Assiniboia Horticultural Society." The following officers were elected:—Hon. president, Lieut.-Governor Forget; president, A. F. Angus; vice-presidents, G. Spring-Rice, Angus Mackay, C. W. Milestone, Moose Jaw; G. Michealis and R. S. Barrow; Treasurer, R. M. Napier; secretary, W. B. Pocklington; committee, J. T. Stemshorn, Jonathan Rigby, W. Cayey Hamilton, K. C., Geo. Watt and R. Martin. It was also decided to co-operate with the Regina board of trade with a view to urging upon the town council the advisability of beautifying the town with trees and flowers.

The Farmer wishes the new society every success in their work in urging upon the town council the wisdom and necessity of beautifying the town. Many a town and village could be wonderfully improved by a small expenditure for tree planting, etc.

Onions are about ripe now, and the following hints as to their winter care may be in place:—If not pulled, pull them as soon as possible and leave on the ground until dry. If the tops remain unbroken, trim them off and cut off the roots so as to give them a smooth appearance. A cellar for storing onions should be very cool and dry with slight variation of temperature. If you have any to sell, sort them, for, even if onions are small, they command a better price than large and small mixed. Keep the smallest onions over till next spring and use for sets so as to have early green onions.

Poplar Leaves Dying.

The growth of most of the native trees in Northern Alberta has this year been most unsatisfactory. Owing probably to the climatic conditions, the leaves began to disappear from the ends of the limbs of the common white poplar before the middle of July. With the warm weather which followed the trouble continued to spread until by the end of August a great many of the bluffs in some parts of the country were quite yellow and the leaves were falling fast. In some cases the leaves were all dead and the trees looked as though they had been scorched by fire. The phenomenon showed itself most in those trees standing in or near water, but also appeared amongst trees on high dry land. The different sorts of poplars, as well as a great many of the native shrubs all show the attack, while the spruce, the ash-leaved maple and some other sorts of trees are very thrifty looking. A very heavy rust appears on the under side of the leaves. The probability is that the trees will be all right again next spring, although many of the limbs have already died back several inches, and in a few cases the trees may die outright.

From all apple growing sections the same report comes—that the prospects for this year's crop range from 50 per cent. of a full crop down to 35 per cent.

The "wild garden" or "mixed" packets of flower seeds are sometimes dangerous to plant. It is much more difficult to determine which of the plants come up are weeds than where straight varieties are used.

The International Society of Arbiro-culture, Indiana, has issued a small pamphlet showing how the catalpa speciosa can be used by the railway companies as a shade tree along their property and how it would furnish railway ties as wanted to build the road. J. P. Brown, Connorsville, Ind., is the secretary of the association.

From now until the middle of October will be the time to put into the ground the hardy spring flowering bulbs. If you have never had any experience, try a small collection from some good seedsmen. For two to five dollars one can get a fine start in tulips, narcissus, hyacinths, "glory of the snow," etc. Every lover of flowers ought to put out this fall a few bulbs of the hardy lilies.

Long Island potato growers are suffering from a new potato trouble, which has been popularly called the "potato wilt." About the time the plants begin to blossom the leaves have a wilted appearance and soon those near the ground turn yellow. The plant is found to be practically rootless, there being only the main root left, and that is much shrivelled up. The trouble seems to be caused by a white worm half an inch long and about the size of a small needle. This worm bores a hole in the stalk at the level of the ground and then works down into the root, when the plant soon perishes. It is possible that this trouble is caused by the potato stalk weevil, a serious pest in other states. The best remedy is to gather the stalks and burn them, thus destroying the insects.

Embroidery should be ironed on wrong side to throw up the design, and be nearly dry first.

WEAK MEN

I BRING YOU STRENGTH.

To feel as vigorous as you were before you wasted your strength? To enjoy life again? To get up in the morning refreshed by sleep, and not more tired than when you go to bed? To have no weakness in the back, or "come and go" pains? No indigestion or Constipation? To know that your manly strength is not slipping away? To once more have bright eyes, healthy color in your cheeks, and be confident that what other men can do is not impossible to you? In short, do you want to be a man among men? I can make you all this because I have done it to others.

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has restored health and strength to thousands of weak and impotent men. If used as I direct, it is a positive cure and cannot fail. It gives the vitalizing power of electricity, without burning or blistering, to every weakened part, developing the full vigor of manhood. It removes all the effects of indiscretions or excesses forever. I want every weak man who is not the man he should be to use one of my Belts, and, when he is cured, tell his friends of its wonderful effects. My Belt is also an absolute remedy for Nervous Debility, Backache, Rheumatism, Stomach, Liver, Kidney and Bladder troubles. It is arranged for women as well as men, and cures female weakness.

NO CURE, NO PAY.

You run no risk. You pay only when cured, if you can offer reasonable security. Failure to cure costs you nothing, as I take all the chances. The Dr. McLaughlin Electric Belt is the best electric body appliance that has ever been invented. (Latest patent June 19, 1901.) It is warranted on a bond of \$5,000 to give a stronger current, last longer and to cure quicker than any other electric body appliance made. Guaranteed for one year at my expense. It does not fall to pieces, as the cheaply made belts do, and does not burn nor blister, as old-style belts do. It is the only up-to-date, modern electric belt on sale today. Send for book with full information FREE. Be cured now while you can, without costing you a cent if it fails. Call and test it free, if possible.

CAUTION—Beware of old-style burning electrode belts, which are using an imitation of my cushion electrodes. My office contains hundreds of these old belts, discarded as useless and dangerous by persons whose bodies have been seared and scarred by the bare metal electrodes. I will make special terms to anyone having one of these old back-burners.

READ MY BOOK, FREE—I want every sufferer to call and test my Belt FREE. If you cannot call, write for my beautifully illustrated book, sent, sealed, free. Address—

DR. A. M. McLAUGHLIN,

Office Hours—9 a.m. to 8.30 p.m.

150 Yonge Street, Toronto



Manual Training.

By Wm. J. Warters Superintendent
for Manitoba.

WHAT IT IS.

In manual training the natural, bodily activity of the child is used as a producer of mental development. The in-born desire of children to do something must have vent, and it is therefore of the first importance that this opportunity of using it for educational purposes should not be neglected. The incidents we recall most vividly in looking back over past years are those with which we have come into personal contact; not those about which we have read or heard of from others. Wherever the sense of touch has played a prominent part in our experience the impression made upon the mind has been deeper and more lasting. Education is not first or chiefly the mere learning of certain facts and principles. It is such a training of the faculties as makes a man master of himself and his conditions. Intellectual interest springs from the work itself and is born of *doing* it. We must never forget that the free use of *all* the faculties is the source of the noblest power and the purest joy in life. The range and force of a cultivated and developed mind constitutes the true wealth which

was the father of manual training in the public schools. To him we are indebted for its introduction into the schools of Finland, which he reorganized, 1858 to 1866. Owing to his influence, in the last named year it was made compulsory that some form of hand and eye training, such as woodwork, basketwork, tinwork or ironwork should be taught in all the normal schools and in the public schools of the country districts. It was first recognized in the official educational programme of Norway in 1860, and since 1891 it has been compulsory in all the normal and town schools of that country.

The Swedish parliament in 1872 voted a sum for its furtherance and the schools founded by August Abrahamson and so ably conducted by his nephew, Otto Salomon (who received his early inspiration from Cygnoeus) are of worldwide renown.

In England and Scotland gifts of money by private individuals enabled educational reformers to give it a trial. It was introduced into the public schools in London in 1886. As woodwork was not then recognized by the Education Department as a school subject the school board was unable to use public moneys to maintain it. The Drapers' Company, however, came to the rescue

Macdonald, of Montreal, who is so generously giving of his wealth in the cause of education. To him we owe our schools so splendidly equipped and their maintenance for three years, so that our citizens may see and judge for themselves of the value of learning by doing.

Our honored chief, Professor Robert-

of all the civilized world can give. All manual training teachers in Canada are already deeply in his debt for many acts of thoughtful kindness and it is owing to his wide experience, keen foresight and skilful leadership that we are able to give so good an account of our progress.

MANUAL TRAINING IN WINNIPEG.

The Central school on McDermott avenue was opened about the middle of January, 1901. This room accommodates 400 pupils, and the boys of the West were soon gaining their first experience of education without books. As each class of forty met for the first time the expressions of wonder at the equipment provided having subsided and the itching of the fingers to feel what the tools were really like having been partially satisfied by a short inspection of these treasures, the pupils received an explanation of the use of drawing board and square and were soon deeply interested in the mysteries of angles and the divisions of the ordinary foot-rule.

Drawing time over, a piece of wood in the rough was handed to each boy, and after a demonstration on the use of the jack-plane, the class was dismissed to working quarters. Each boy is provided with a fully-equipped bench, and soon the interest was so deep that the shavings to an onlooker seemed to have obtained some unknown power of fascination. It is most interesting and amusing to watch the boy's first attempts to handle a plane. The awkward efforts to get into the proper position, the disappointed looks as, after repeated trials, no result seems obtainable then the eager face, the glow of satisfaction, and the glance of pride around at his classmates as the shavings begin to appear. Is this education do you ask? "Come and see." Our schools are open from 9 to 11 a. m. and 1.30 to 3.30 p. m., and visitors are always welcome. Whenever you come you will always find plenty of boys thinking and working hard without knowing it. Drawings are outspread and often referred to for measurements



A Class in the Old Mulvey School.



Central School, Stovel Block, McDermott Ave., Winnipeg.

alone is worth reckoning in time and eternity. Emerson says:—

"There is something not solid in the good that is done for us. The best discovery, the discoverer makes for himself. It has something unreal for his companion until he too has substantiated it."

The writer here touches the foundation stone of manual training. The child learns by doing in these schools. He is brought into contact with and creates things for himself. Our rooms are fitted with benches and tools, as you see in the illustration, and here the boy first draws the object which he afterwards makes, the teacher acting as his *mental guide*, directing his thoughts in order that he may more readily discover for himself the hidden truths underlying all work. If a boy thus finds he can make a few articles for himself with his own hand, it tends to make him self-reliant, and the planning that is necessary for the execution of the work is a discipline and an education of the highest value.

HISTORY OF MANUAL TRAINING IN PUBLIC SCHOOLS.

The movement for its introduction into primary schools began about forty years ago. Uno Cygnoeus (1801-1888)

by making a grant of \$5,000 through the City and Guilds Institute.

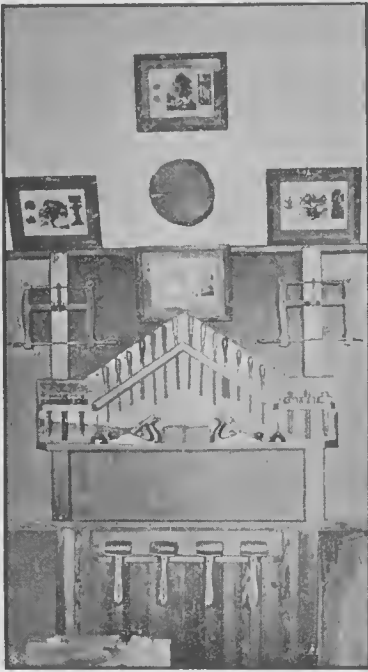
Manual training was found so thoroughly acceptable and its effects so beneficial and far reaching that it spread rapidly. In 1890 woodwork was officially recognized as a school subject, and school boards and managers throughout the country took up the work and its development and success since that time has been phenomenal. This form of education is now worldwide in its application. With Sweden, Finland, Denmark, Norway, France, Belgium, Switzerland, Austria, England and the United States pressing forward with zeal, the training of hand and eye will in the near future receive that attention which its importance as an educational agent demands.

Teachers have left England during the past year in large numbers for Ireland, Australia, New Zealand, South Africa, Canada, and many more of our colonies, and still the demand exceeds the supply. Only last week a convention of 600 of its teachers met at Buffalo to discuss the welfare of this great reform in the land of our cousins across the border. The provinces of this great Dominion (The Lady of the Sunshine and the Snows) are favored in having so wise a philanthropist as Sir W. C.

son, too, whose indefatigable energy is so willingly outpoured in the service of the land he loves, and has already done so much for, is giving largely of his time and strength in order that those to whom the future honor of our land must be entrusted may have the benefit



A Class in the Machray School.



Extra Tools (Machray School).

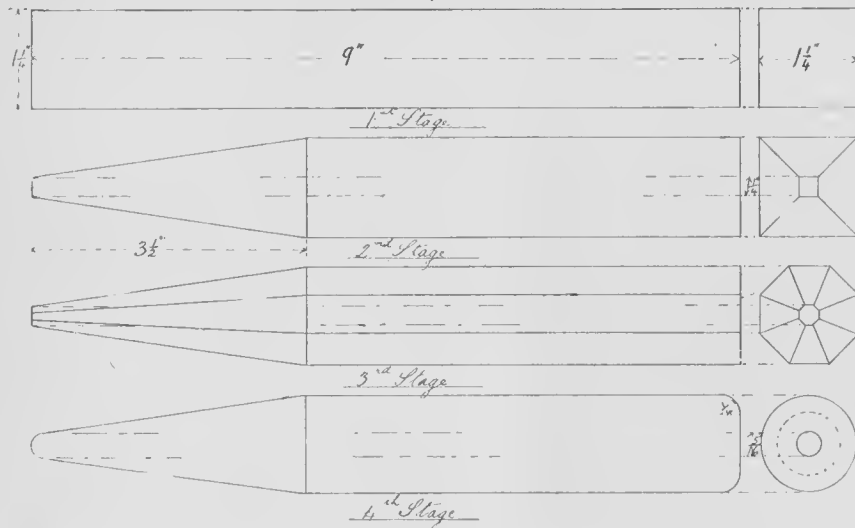
and design, while the thoughtful countenances and busy fingers denote how deeply interesting to the boyish mind is the shaping of the wood to the required shape and size.

The first model to be attempted is a simple cube. I feel sure visitors have

with the straight-edge; each side must be square one with another and proved so with the try-square. The correct measurements marked off by using foot-rule and gauge, and last, but far from least, the ends have to be sawn off to measurement and their perfect squareness obtained. Before all this is successfully accomplished, imagine, if you can, what care, concentration of thought, planning, scheming, disappointments and determination are necessary, and you will understand how manual training helps in the making of all that is manly. This process goes on week by week. As one model is mastered and the peculiarities in the manipulation of one tool overcome, another is provided. Thus the boy learns that difficulties are made to be fought with and defeated.

In March, the old Mulvey school, after being thoroughly renovated, was opened, accommodating a further 400 boys, with Mr. Fish, of Reading, England, as Principal. A month later a room in the Machray school was utilized for 200 more, and Mr. Bailey, of Manchester, England, installed as Principal. The total accommodation now provided is for 1,030 pupils, each attending for one half day per week. This provides for the whole of the boys in Grades V, VI, VII and VIII attending the public schools of the city.

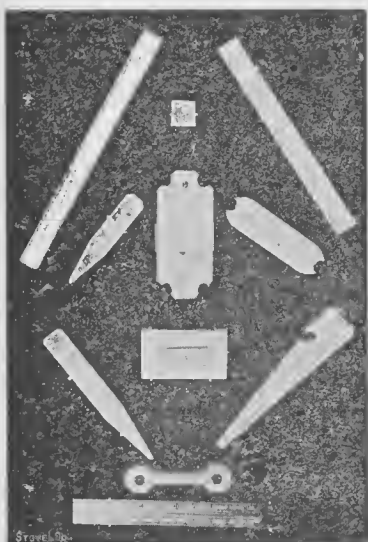
I am inserting here a drawing of the planting pin, which will speak for itself. Each step in the progress of the model is shown, in order that the boy may be sure of the ground over which he has to travel.



Drawings of the Planting Pin.

often looked at these without realizing the care and pains that have been bestowed upon them by their makers. Just think for a moment of the operations to be gone through before the task can be satisfactorily accomplished. The wood must be planed to obtain a true surface with the jack-plane and tested

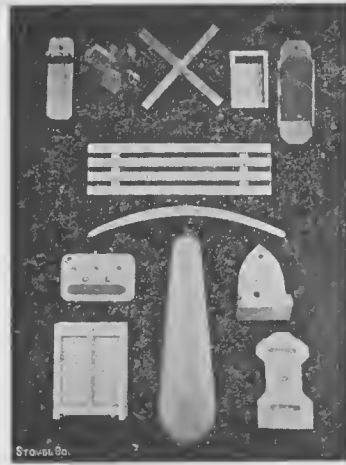
That the boys like the work and are keenly interested in doing their best is proved by the long lists of names on our "honor rolls." These are framed re-



FIRST YEAR'S COURSE.

1, Cube; 2, Plant Label; 3, Flat Rule; 4, Fishing Line Winder; 5, Round Rule; 6, Door Button on Base; 7, Planting Pin; 8, Tent Peg; 9, Rope Stretcher; 10, Match Holder.

cards of the number of "excellents" obtained by each boy in drawing and woodwork. Gold stars are used to denote the number of awards and there is



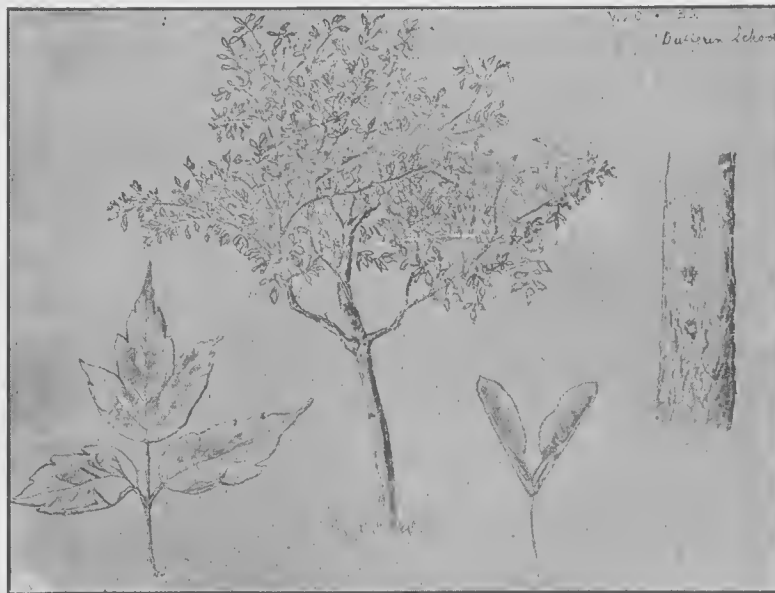
SECOND YEAR'S COURSE.

1, Flower Pot Stand; 2, Nailed Box; 3, Pan Rest; 4, Toothbrush Rack; 5, Letter Rack; 6, Soap Box; 7, Sleeve Board; 8, Three Cross Puzzle; 9, Nail Box; 10, Coat Hanger; 11, Sewing Companion; 12, Calendar Stand.

much eager counting to see which particular boy holds the record and whose school has the greatest number of stars. One boy has obtained eight stars for woodwork and fourteen in drawing, while another has ten in each subject already. We have, also, "good conduct rolls" in each school, where a record of each class is kept, and it is surprising how anxious the boys become that none of their number should transgress any of the rules and so lower the position of their school. An unbroken line of excellents in many of the classes shows how well the work engages the minds of the boys.

As each tool is introduced a short talk about its structure and use is given, and these will be enlarged upon as time goes on. The timber, too, forms a capital subject for study. Our talks about its growth, seasoning, shrinkage, etc., are most interesting. Our rooms are surrounded by samples of various kinds of timber and the boys, as far as possible, find out for themselves the causes of the different appearances and forms of the many examples of growth, shrinkage, etc. A few judicious words by the teacher will often keep the boys busily thinking out cause and effect of what they see. To familiarize the pupils with the different woods, we have specimens with the name on each framed, within easy reach, and near by on a shelf, where the boy may handle them, unmarked pieces, so that the pupil may compare and contrast and retain in his mind the peculiarities of the various kinds.

Something to do when at home to keep busy fingers from mischief is one of the necessities for boys and girls.

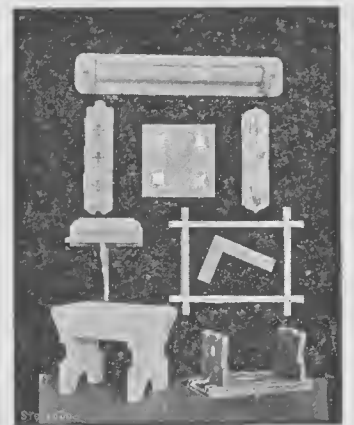


Facsimile of Drawing, by one of our scholars.

thoroughly healthy child must do something, excepting only the time for sleep. I give below the result of a suggestion for home work I made to our boys. The drawing was to show the shape of the trees (ash leaf maple), the design of the leaf, seeds, with any other part or peculiarity. The work was entirely completed by the boys themselves and the result has been most promising. I am hoping with improved organization to make this even more successful.

In the spring over 900 packets of seeds of the ash leaf maple tree were given out with full instructions as to their treatment, for which I am indebted to the kindness of Mr. Bedford, of the Experimental Farm, Brandon. I hope by this means to interest the boys in tree-growing, and I propose in future that each boy shall keep a record of the progress made, such as number of seeds, date of planting, when appearing above ground, height at different ages, etc. Framed in the manual training schools are preserved leaves of trees, and many of the boys are now making collections for themselves as well as supplying specimens for our rooms.

I have ordered, and expect shortly, sections of timber mounted between glass, in order that the light may pass through the pores and thus show the different formations.



A FEW OF THE ADVANCED MODELS.

1, Finger Plate for Door; 2, Lamp Stand; 3, Letter Rack; 4, Bracket; 5, Oxford Frame; 6, Try-Square; 7, Towel Roller; 8, Stool; 9, Bookstand.

You will understand from the foregoing that our main object is to teach by observation and experience, and when speaking about trees, their leaves and growth we take the classes to a neighboring wood, to look at, to feel and to talk about them. Each pupil is supplied with a printed form (as below) to suggest what he is to look for.

* STUDY OF TREES.

(If you can give any further information than that asked for, do so.)

GENERAL APPEARANCE:—

(To be taken at a distance of about 30 yards.)

1. Top.—Is it round, oval or conical?
2. Branches.—Are they wide-spreading, growing horizontally, drooping or twisting?
3. Trunk.—Is it thick, thin, straight, twisted or graceful?

BARK:—

1. Color.—Is it White, Brown, Red, Black or Silvery?
2. Texture.—Is it rough or smooth?
3. Cause of Roughness.—Is it caused by vertical grooves or in what direction do they run?

LEAVES:—

1. Color.—Is it Dark or Light Green, Yellowish or Brownish Green, etc.?
2. Shape.—Is it oval, pointed, slender, wider at base than apex or opposite? Are the two halves of leaf equal or unequal?
3. Size.—Is it large, small or medium?
4. Texture.—Is it stiff? Are the upper surfaces rough, smooth or downy?
5. Edges.—Are they deeply indented or otherwise?

TIMBER:—

Its Structure.—Say what you know about its annual rings, medullary rays, colour, hardness, weight, etc.
Draw sketch of leaf.

The great majority (I had almost said all) the boys will not miss school if they can help it. An instance occurred in connection with the Machray school which is worth recording. The boys carry to and fro between the schools a register of attendance and this is placed in the care of one of the members of

"Why can't you be still?" is the oft-repeated cry of parents. Still! Of course they cannot! It is not natural. Those limbs were made to use and a



In Elm Park.—Studying the Bark.

the class. The youth who was carrying this one day in the early spring, just when the ice was beginning to break up was tempted to the river side to play. By some accident he fell in, with disastrous effects to clothes and register. Hastening home, clothes were changed, and half an hour late he presented himself with what remained of our record of attendances, anxiously requesting that he might be allowed to take his place for the remainder of the lesson, and when installed at his bench he did his best to recover the ground lost in that precious half hour.

A parent visiting the Central school lately told me his boy was sick in bed, and when manual training morning came round the door had to be locked to prevent him making an attempt to join us at his pet lesson.

During the the last session of the normal school the first class students attended one forenoon per week, and the enthusiasm and interest created among them spoke well for the reception of the subject by the teachers of the province. In addressing the teachers, too, at the Boissevain convention, I received great encouragement from the manner in which the whole idea of our work was appreciated by those present.

Am I satisfied with what is being done at present? Decidedly not. Satisfaction brings contentment, and this will not be mine as long as I can add one little item to the attractiveness and good influence of manual training and Manitoba can boast of its complete system of hand and eye training. That there is a great future before this branch of education here I am convinced,

but it should form part of our school curriculum from the lowest grade. It must not be left until Grade V before the training of the mind of the child through the fingers is provided for.

I hope soon to be taking classes for teachers in cardboard modelling for Grade IV, and during the month of July a teachers' course in woodwork is being held, for which I have now twenty-three applications. I trust through its means that the efficacy of manual training as an aid to education may become more and more recognized throughout the Province.

I must express my deep indebtedness to the members of my staff here, who have so willingly devoted much of their own time in helping forward the organ-

ization in Winnipeg, and I am favored in having the assistance of men of such ripe experience as Mr. Fish and Mr. Bailey, whose efforts have been ably seconded by the remainder of the staff.

The great difficulty to be faced has been shortness of teachers and the work has fallen somewhat heavily upon all. After the vacation this promises to be better, and I am looking forward to increasing progress. Members of school boards and those interested in education throughout the Province are specially invited to visit our schools to see and examine into our scheme, and in whatever way I can be of use in any school district I will willingly do my best for the good of our children and their preparation for life's battle.

Confidence Begets Confidence.

We have been astonished at the great number of repeat orders which we have received during the short three months since we began to advertise in these columns. We have received these "repeats" simply because our first shipments have been absolutely satisfactory. Our carefulness in the execution of orders received has created confidence on the part of our customers. We are worthy of this confidence. We never misrepresent; we never take advantage of a customer. We know what is right. We do what is right. If you are one of our customers, you know it. If you are not a customer you should be, for by so being you will save money when buying the things you eat, wear and use.

Always remember that it is our wish to gain the permanent patronage of all who favor us with a trial order. If you should order anything from us, do you suppose for an instant that we should add to the volume of our business by sending you an inferior article? Not much! If you are dissatisfied with the first shipment the probabilities are that you will always be so, and we could not reasonably expect further patronage. It is our aim to so thoroughly satisfy a customer in one deal that we shall continue to receive his patronage in all lines of our establishment. If satisfied with a sewing machine for instance—and by the way you'll not get a better machine anywhere than that advertised upon another page of this magazine—the customer is bound to come back for groceries, dry goods, or something else. It's your permanent trade we want, and "if quality counts" we'll get it. Do not think just because our prices are low that the quality of goods we sell is below standard. The fact that we undersell all competition is easily explained by the fact that we run no accounts, keep no salesmen and entail no losses. Our saving in expense is so great that it means lower prices to you. See!

If you'd like a copy of our catalogue its yours for the asking.

The F. O. Mabber Co.,

WINNIPEG, MAN.



In Elm Park.—Studying the Leaf.

AMONG BOY FARMERS.

In our last issue we gave part of the lot of 37 letters from young people on farms, sent in response to our request. Below we give another batch of them. Everyone who reads these letters must admire the natural yet capable way in which the writers speak of their present work and future prospects as the coming farmers of the west. We regret that we cannot give a special prize to every one of the writers, but are glad to have given them the opportunity they have taken to tell us what is in their minds, and hope to hear more from them in the future. To be able to give a clear statement of what you know and do is a very important acquisition.

We are advised that E. Stanley Wood, the writer of the first letter in our last issue, is ten years old, and his brother Harold, who writes with his left hand is twelve. L. W. Whittle, Strathclair, the writer of another of those letters, says he is 17, and adds: "I think it would be interesting for both young and old folk if you gave some subject for those wishing to write on. I am sure there would be great interest taken in it. I would do my best to help it on, just for the sake of writing, of which I am very fond. I like farming, but to become a writer of something in the educational line is my ambition. I am exceedingly fond of reading; good and useful literature very seldom escapes my observation. I would like to hear from you concerning the above wish. I will always take interest and do all I can to help on a thing like that."

We shall try to turn this suggestion to account.

Has taken hold in a district not similar to the last he lived in—is a rattling worker.

Rose hill, Man., July 26th, 1901.

Dear Editor: I live 12 miles south of Macgregor on the hills. We moved this spring from the Red River Valley. The scenery is very pretty with the high hills and valleys and oaks dotted all around. After the flat country around Winnipeg it is a big change. I am breaking every day it is hard work but I like it all right I have 1 cow and 1 heifer my cow has been milking over a year now. I also have 2 young pigs I bought them this spring. I paid \$5.00 for them. We have 16 pigs and I help to feed them. Father has 30 head of cattle, there is lots of work in the winter cleaning them out and feeding them. I have five tame rabbits. I have only had 11 young ones this year yet, last summer over 100 young ones and sold them all. I chop the house wood, but we don't need much this hot weather. We have 10 cows milking but I don't milk I look after the horses instead. We have a separator and I help to run the milk through it. Then we have the 6 calves to feed. I had a calf but he died this spring, a wolf tore him badly. We have no garden this spring. I generally have one but it was too late to set one this spring after moving. My Father has taken the Farmer as long as I can remember and we are very interested in it. I am 15 years old and now Mr. Editor I must finish this. Wishing you and the paper great success.

I remain,

yours Faithfully,

O. E. Wright.

Particulars of a mixed farming enterprise—Was at Yorkton Fair.

Seeburn, Man., July 15th, 1901.

The Nor-West Farmer.

Dear Sirs: I saw your ad. in the nor-west Farmer, Boy Farmers. I am a boy myself and take a great interest in farming. I have worked on a farm ever since I was a very little boy. I have a cow and calf of my own the cow is a thoroughbred we have thirty-six head of cattle and ten horses and three colts, two heavy draught and a light one. We have twelve calves this year. This has been a very wet summer in Manitoba and the crops are looking fine, some of the wheat is out in head around here. I am ploughing summer-fallow

now with a gang plough. I was at the Yorkton summer Fair and enjoyed myself very much. I went up on the train, there was fifteen people on the train so it was badly crowded. This is the first Fair that has been held at Yorkton and it was a good one. I would like very much to attend the Winnipeg Fair. I have an uncle and Aunt and two cousins in Winnipeg. My parents have been in Manitoba eighteen years on a farm. we are building a new house this summer. I like working around with tools. We have a fine garden this summer I am growing some mangels and potatoes to feed my cow in the winter this ends my letter.

Yours Truly,

Edwin T. S. Hardy.

A stout boy with the makings of a thorough-paced farmer in him.

Strathclair, Man., July 16, 1901.

North West Farmer.

Mr. Editor: I live on a farm with my Father and I like farming very much. Father gave me a team of horses for my own. I have done all our seeding with the drill for the last two years. I break and do summer fallowing and a little of every thing on a farm. I have seen in the north west Farmer several times about harrowing Grain after it is up. A year ago last spring we had about 4 acres in a field of wheat which was bad with weeds we could scarcely see any grain at all we put the harrows on it and gave it five strokes with the harrows 3 up & down and two crossways. Father told me to sow 2 bushel to the acre of barley on these 4 acres. We had 2 acres of wheat and 2 of barley. When it ripened the 2 acres of wheat was as pretty a crop as we ever had you could not see a weed in it the wheat grew so fast that it choked out the barley, these 2 acres of wheat was rolled when we sowed it in the spring. the other 2 was not rolled and the wheat and weeds was all harrowed out as the ground was loose I am a farmer's boy aged 16.

James William McPherson.

Another lad of the right sort spends his school holidays at the plow.

Reston, June 30th, 1901.

Dear Sir: I saw your kind offer in the nor-West Farmer stating that if any boy or girl on the farm would tell you what they are doing if they had the best story they would receive \$2.00 and the second prize would receive \$1.00. I thought I would try for a prize.

I am fifteen years old. I have been going to school pretty regular this year. I stayed at home two weeks to plow for oats a while before holidays but it is holidays now and I am plowing for summer fallow. We have eighty acres to plow. We have seven horses plowing four on the sulky-plow and three on the walking plow. I am plowing mostly with the sulky-plow. We have One hundred and fifty acres of wheat and forty acres of oats in. The wheat is about two feet and a half high and the oats a foot high. We have a large garden and about 3/4 of an acre of potatoes.

We are soon going to start haying. I am going to rake the hay. We have a Deering mower and Rake. We store most of our hay in the loft. I was at a plowing-match the other day. They were sixteen plows working. They did beautiful work. I will now close.

I remain yours every Truly,

William John Ayers.

Will dig for gold on a well worked farm.

Springfield, Manitoba,

July 23rd, 1901.

To the Editor of the Nor-West Farmer.

Sir: In accepting your invitation to write an account of how I am occupied on the farm, I shall try to do so as briefly as possible.

Eight years ago I was transported from the city to the country, through the Rockies to Manitoba.

The beginning of this season found me herding cattle—while doing so I managed to read a number of capital

Paying too Much

You are paying too much for your shoes—that is to say, you are unless you are buying them from us. It isn't necessary to pay a high price, for we can give you everything you expect in shoes—fit, style, comfort and wearing qualities—at about a quarter or a third less than you would pay elsewhere. Let us have your order.

MEN'S BOOTS.

Average postage about 25c. per pair. Heavy boots about 40c.



No. 20—Black split Harvest Boots, pegged sole. Sizes 6 to 11 (no 1/2 sizes). \$1.00.

No. 21—Tan kip, excellent for wear, pegged soles. Sizes 6 to 11. \$1.25.



No. 24—Made of good strong smooth leather, a nice, comfortable fitter, riveted sole, full plain toe—a well-finished boot. Sizes 6 to 11. \$1.75 per pair.

No. 25—Grain Kion-dyke, best all grain leather, extended sole, large brass eyelets, treble pegged soles, a very durable boot. Sizes 6 to 11. \$2.00.

No. 26—Kid boot, medium heavy weight, sewn sole, plain wide toe, a soft and comfortable boot which makes a regular foot-rest for an old man or for any one suffering from corns, bunions, etc. Sizes 6 to 11. \$2.25.

No. 28—

These are made of Box Calf on the new medium toe last—not too pointed and not too "English"—tip, medium heavy sole; a boot of really nice appearance. Sizes 6 to 11. \$2.50 per pair.

No. 29—

A fine looking boot of medium heavy weight, made of leather that will keep soft and pliable, and will wear well, medium toe, tip. Sizes 6 to 11. \$2.75 per pair.

No. 30—

Regular old man's comfortable boot, made of good kid, medium sole, made especially wide for wide feet, plain, can be recommended for comfort. Sizes 6 to 11. \$3.00.



No. 22—The Klondyke, Blucher cut, large brass eyelets, heavy sole, double pegged. Sizes 6 to 11. \$1.50.

No. 23—Buff leather, riveted soles, medium toe, tip, a fine looking boot. Sizes 6 to 11. \$1.50.

No. 27—First class working boot, heavy sole, stugged and pegged, strong and durable, soft leather upper, made with wide plain toe. Sizes 6 to 11. \$2.50.

No. 31—

For hard usage an honest \$3.50 boot will wear longer than a \$6.00 pair—because stronger sorts of leather can be used. This is an honest \$3.50 boot. Made of box calf, Goodyear welt, tip, medium toe, neat and stylish. Sizes 6 to 11. \$3.50 per pair.

No. 32—Box calf, Goodyear welt, tip, a very nobby boot with toe slightly more pointed, equally as good value. Sizes 6 to 11. \$3.50 per pair.

No. 33—

Made of very fine kid, hand sewn, Goodyear welt, medium toe, tip. One of the dressiest boots on the market—a more shapely or stylish boot cannot be obtained anywhere at any price. \$4.00 per pair.

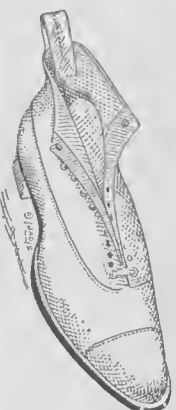
No. 34—

Box calf, Bulldog toe, Goodyear welt, tip, a boot that is bound to give satisfaction to the wearer. Sizes 6 to 11. \$4.00 per pair.

No. 35—Elastic side, fine kid, plain flexible sole. Sizes 6 to 10. Price, \$2.75.

No. 36—Kid elastic sides, medium toe, solid sole, toe cap. Sizes 6 to 10, no 1/2 sizes. \$2.75 per pair.

No. 37—Men's elastic side, box calf, plain, very heavy soles, and comfortable fitting, and the best wearing made anywhere at the price. Price \$4.25 per pair.



If interested, write for our fall catalogue.

The F. O. Maber Co.

WINNIPEG.

books such as Scottish Chiefs by Jane Porter, as well as some of Henty's, Conan Doyle's and others. This was during the dry spell of weather. Rain then came and pasture in abundance, likewise strawberries, of which I picked the largest part of seven gallons. As to gardening I helped considerably but did not do any on my own account because the grubs were so busy I decided that feeding them would not be a paying industry but I intend to do my share in the eating line (vegetables not grubs.)

Of course I assist with the milking, and turn the separator, feed the calves and pigs, hens and so forth.

To-day I have been the boy with the hoe, to-morrow it may be the rake. But I do not complain, no! not I, for I mean to be a farmer, to make the ground yield her nuggets of pure gold. For I believe of all the many kinds of labor none has so largely to do with

the health, wealth and happiness of the nation as that of the farm.

Yours Respectfully,

Donald Paterson.

What I do on the farm. By a boy of the right sort.

I live on a farm in Alberta about three-quarters of a mile East of the Little Red Deer River and my Father takes the Nor-West Farmer which I delight in reading.

I have lived on the farm since ever I was two years old and can help a good deal. I help to do the milking, the haying, the gardening and also help to do many other things.

O own two cows and one year old heifer and also one two year old heifer which will have a calf this year. I have in my possession but one steer which is a year-old.

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sent you for the asking. It's full of dollar-saving news.

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THE
ROBERT

SIMPSON

COMPANY,
LIMITED

Department N.W., TORONTO.

I have but one pony which I ride to school and in the winter I drove him to school, but I stopped it because the snow between the fences was so deep, that when you met anybody and had to turn off you had to be careful because you were likely to get stuck or upset.

I like the work I do on the farm very much and I think I would not like to live in a city where I could not get working amongst cattle and horses.

J. H. Duncan,
Innisfail, Alta.

A daughter of Eve. Her penmanship is capital.

Miniota, July 2nd, 1901.

Dear Editor: I saw in the Nor-West Farmer that you wanted boys and girls that live on farms to write about their work on the farm and what they think of it. I thought I would write though I don't expect to get either 1st or 2nd prizes. I help with the milking. The cows I milk are both easy. We call them Star and Beasty. My younger sister milks a black cow called Dinah. I think it is cruel to hit a cow with the stool or a stick whenever she moves, though I am provoked when she sometimes puts her foot in the pail or upsets it. My two sisters and I do most of the weeding in the garden every year. We have to go over the onions either three or four times a year not counting pulling them in the fall. I don't care much for weeding, but I like giving the little calves their milk. Well, I can't think of anything more that I do except helping with the house-work and sometimes going down into the pasture for some of the horses. I am

Your sincere Friend,

Eva I. Clyde.

Short but plthy and all to the point. Well written.

Regina, July 15, 1901.

Dear Editor: I read in the Nor-West Farmer that you would like to hear from the boys. I am 11 years old, I live on a farm 3 miles out of town we have

10 cows and 8 calves I get up in the morning at 5 o'clock drive the cows in to the corral get bran ready for them carry the milk into the house feed the cows and after the milk is separated I feed the calves. I feed two pigs and a lot of hens knight and morning every day and do other chores. I like the farm life in the summer when it is cool and no mosquitoes.

Collie None.

A boy with a business head and knows the value of education. Hope to hear from him later.

Lamerton, Alta, July 15, 1901.

To the Editor nor-west Farmer.

Sir: My sister Nelly is a subscriber and says she would rather refit the same hat than think of doing without the Farmer but to come more to the point I am a reader of the Farmer too and seeing your offer re Boy Farmers thought I would try and compete for a prize being there is nothing to lose and a chance of making an honest dollar. In some parts of this new Country people live far apart and in this way sometimes Children are beyond reach of schools. This being my case my Father decided to send myself and two younger brothers to the St. Barnabas Mission School, where I have been for one year. At present I am at home spending the summer holiday vacation with my Parents. In this Part of Alberta ranching is one of the Principal industries. I am very fond of stock, can milk cows and on a pinch ride a Bucking cayuse but as starting a Ranch requires some capital I have abandoned the idea of becoming a genuine cow Boy so I intend if possible going to school until I am old enough to enter for a home stead. I am the sole owner of four mares which in the mean time my Father is breeding and looking after for me with this and what Education I can get I am hopeful of facing the Prosperous profession of mossback. I have a fancy for hogs barn door fowl and garden-

in Manitoba this I look forward to as my calling.

Charlie G. Atkinson.

Works outside and in, and goes to school as well. Will make his mark yet.

Balmoral P. O., July 6th, 1901.

Sirs: Being a reader of the Nor-West Farmer and seeing your advertisement for boys to write on what they do at home. I will tell you what I do to help. I have a horse and a calf belonging to myself that my father gave to me for working. I help with the milking, weed the garden, help to feed the cattle in winter, and help with all the other work I can after school is over. Above all look after my own two animals, which knows me well because I feed them. I also like my work very well. I also help mother with her work in the house by minding baby for her and feeding and looking after the chickens. I will now close hoping to see other boys and what they do at home.

Your respectfully,

Percy Florence.

Believes in mixed farming.

Strathelair, Manitoba, 8, 7, 01.

Dear Editor: Having seen the competition in your valuable paper for prizes for the best piece on farming, I thought I would try. I am 17 years old, and live on a mixed farm, which I think is far the best, for if a man loses his crop, he has the cattle to fall back on. Farming, I think is the foremost and best occupation in this country and every other civilized country. That can easily be proved: take central Africa, China and other semi-civilized countries, there is no farming, neither is there any ambition on the part of the natives. Take Christian and civilized countries, there is farm and also advanced progress. Some may say, "Well, look at the railways and cities in civilized countries." What has that to do with farming? Take our country first. The farmers were the predecessors of the cities and towns. They had

to have some place to take their grain and to get their food and clothing so towns were necessary. If there were no farmers there would be no towns: Whether it is fruit, vegetable, or ordinary farming, or ranching there must be some place for trading. Look at Manitoba today, to what it was 50 or 60 years ago: That is through farming. It is also healthy and has more advantages than the cities. It is asserted that 90% of the death rate are city people. But to tell the truth, I prefer city life myself, by the seashore. Of course that is healthier than inland cities. I have lived at the sea-side most of my life, but I think a good, fresh and delightful country like Manitoba, beats them all. Thanking you for allowing this contest, I remain,

L. William Whittle.

Farming not all a plenty.

Ellisboro, Assa., July 5th, 1901.

To Editor of "The Nor-West Farmer." My father takes your paper, and I like to read it very much. I am fourteen years old, and like working on a farm. My father owns three quarter sections of land, in a valley, nine miles north of the track. My father has oats two feet eight inches long, the wheat is not quite as long. We have forty-five head of cattle, and eight horses. We have a farm south of the valley to. We have a large barn 72 x 21. I have been plowing this spring, and think it a good job. I have drag-harrowed, mowed, raked, cultivated, and disk-harrowed. I think drag-harrowing a weary job,—tire-some on the legs. I like winter time on a farm better than summer time. I like riding horse back on a good fast horse. I think I would rather work on a farm than do anything else, as it is not one thing all the time, but a change of work. I liked your story entitled "A Bulge in Wheat" and would like some like it to read.

I hope to win your prize which you kindly offer.

I remain,

Jas. McLean.



September.

September—dreams are in the sound—
Dreams in the warm and yellow ground,
Dreams in the ripening leaves of trees,
And in the drone of lazy bees,
And in the haze upon the hills,
And in the sleepy meadow rills;
Dreams in the soft, fruit-scented air,
That wafts away the lightest care;
Dreams full of whispers in the corn
That heaps the stubble newly shorn.
—Frank Leslie's Popular Monthly.

The Greenhorn.

A Yarn of the Cattle Country.

Original Story, by Basil C. d'Easum, Fort
Saskatchewan, Alta.

Say, did I ever tell you 'bout that tenderfoot that joined the "Diamond F" outfit last heef round-up?

Well, say, he was a holy terror!

It come about this way: Our wagons was at Cherry Coulee, we was just after having dinner, and the boss, old Rowe, was going round like a bear with a sore head, ragging at everybody and everything. This was because two of our top-hands had got huffy and pulled out that morning; consequently some of the boys was beginning to kick most outrageously at the thought of having to do extra night-herd work. Cherry Coulee ain't far from town, and we used often to have people come out to look at our outfit when we was camped near town, so when we seen a dudish looking fellow, with a "Christy-stiff" hat and a stand-up collar, come a-walking towards the wagons, we just supposed he was another of them Eastern tourists who was nosing around, and we didn't pay no attention to him. But he walks up to the cook, who was monkeying round the fire, and says he: "Mister, which of you might he the boss here?"

The cook, he just pointed at Rowe, and the dude walks up to him and says, quite pleasantly:

"I heard in town this morning that you wanted a man, so I thought I would come out and get the job."

Rowe looked at his "Christy-stiff" hat, his stand-up collar, his silk tie, his hoisted shirt and his pretty clothes, and then he says quite slowly: "And what kind of job might you be looking for?"

"Why, punching cows, of course," said the stranger.

"Yes?" says Rowe. "And what do you know about cow-punching and where might you have punched cows?"

"Down in Missouri," says he, still smiling most pleasant. Now, p'raps you don't know it, but there ain't no cow-punching in Missouri, in fact, that same place is pretty much of a hayseed state and a regular nesting place for suckers, greenhorns and tenderfeet, so when the dude said he came from Missouri, Rowe just looked at him and said: "And what outfit might you have worked for, down there?"

"Well, I worked for my Pap," says he; "Pap had high on to twenty cows, and I had to drive them down to the pond to water; Pap used to ride the old hay and I used to ride Molly; sometimes I'd ride Jem, the mule. Oh, I've had quite a lot of riding, I can tell you. Maw said I could ride well."

"That so?" said Rowe; "Well, I guess I haven't got no job for you."

"What!" says the dude, mightily surprised; "P'raps you think I can't ride good enough?"

"And that's no lie," said Rowe, who was getting a bit tired of him.

"Oh, hut hold on!" says Mr. "Christy-stiff." "You haven't seen me ride. Give me a show, I'm pretty hard up and I want a job."

"Look here," said Rowe, "you want a show and I'll give you one. You ride that half-faced bronc over there, and, if he doesn't chuck you, I'll take you on and give you top wages."

Now this same bronc was a regular outlaw and mankiller and there wasn't a puncher in the outfit who could stay with him, though we had some bronco-twisters who were no slouches either; he was a vicious, hitting, striking, whistling, snorting terror, and as for bucking, why, he'd sooner huck than eat. We called him General Weyler. It did seem rather low down to run the stranger up against such a cyclone, but he was so precious green he just jumped at the chance.

"All right," says he; "will you give me top wages if I ride that horse?"

"Yes," says Rowe, chuckling to himself.

"And p'raps you wouldn't mind huying me an outfit too, as I'm broke," said the dude.

"I'll do that," says Rowe. "I guess sticking plaster is pretty cheap," whispers he to us boys who was standing round.

"Here, Joe," says Rowe, "You go and help Cadotte catch and saddle up old General Weyler and bring him round here."

So some of the boys caught him up and took him round to the hack of the mess-

*"Ragging," i.e., "chewing the rag."

The handwriting has changed but the quality of Blue Ribbon Tea is just as good as ever. Was there ever such a Tea!

tent, roped him, threw him, blindfolded him and saddled him and then brought him around to the tenderfoot.

"What a funny looking saddle!" says he. "Dear me, I don't think I can ride on that thing. Pap's saddle wasn't like that, and besides I generally rode hare-hack when I was to home. Won't some of you gentlemen please take it off?"

So we took the saddle off. Then says he: "I ain't used to that kind of fancy hridle, Pap had a hridle, hut I generally used just a rope round Molly's neck, or a halter."

"Please take the hridle off."

So we took the hridle off, hut it was a tough job, for old General Weyler was waltzing round in fine style, kicking up and striking out and snorting to beat the hand.

The Missouri hayseed's eyes hegan to hulse out some, and says he: "That seems a pretty ornery kind of horse. I guess I may have a little trouble in getting on him. I ain't afraid of him once I can get on him, but getting on seems to be the trouble with me."

"Yes," says Rowe, "that does seem to be the trouble, hut some of the boys here will give you a leg-up, if you like."

"Oh, no," says he. "My Pap useter say that if I couldn't get on my horse that waiking was good enough for me. I guess I can have a try at him, if one of you gentlemen will please lend me a pair of spurs."

Oh, hut he was most polite and innocent! So I gives him a pair of spurs and he puts them on and sidles up to old General Weyler, while us boys was just getting ready to fall down and die a-laughing.

Joe Kirkwood and Cadotte was holding on to the rope and the bronc was dancing round them with his ears laid hack and a considerable amount of white in his eyes, when all of a sudden that crazy tenderfoot rushes at him, grahs him by the mane and scrambles on to his hack, snatches the hackamore rope from the boys and turns him loose!

Well, sir-ree! That was a circus! There was clouds of dust, and snortings, and yellings, old General Weyler hucking endways, sideways and every-which-ways, while that greenhorn from Missouri just dug the spurs into him and hanged him over the head with that there "Christy-stiff" hat!

There was a little schoolhouse close by, and what does that blamed fool do hut ride kersmash through the door and into the room, and the first thing we knowed, there was the kids just a-holling out of the windows and the schoolm'am a-yelling blue murder! She was a pretty pretty girl and some of us run there in a considerable hurry, hut before we could get there, out comes mister man, lamhasting away with his "Christy" hat while old General Weyler looked kind of silly with a kid's slate on his off hind foot and his mouth full of copy hooks and such like truck. But though he put in his very best licks he could not pile that greenhorn I guess that Christy-stiff hat kind of paralyzed him you see cow-horses ain't used to such trimmings.

Anyhow, after the tenderfoot had charged round for awhile and fair discouraged old Weyler, he rode right up on the side-walk, into the saloon and up to the bar; and says he, throwing one leg over the horse and sitting sideways with his hattered hat perched on one of Weyler's ears:

"Well, boys, I guess the drinks are on Rowe this time? Come a-running, everybody drink!"

Come to find out afterwards, he wasn't no greenhorn at all, hut the "Nevada Kid," and I guess you know what kind of a bronco-huster he is.

A Reliable Man.

He read: "Dear sir, I can meet your needs As a gardener. I am at home In the training of shruhs, the growing of seeds,

And the culture of soil and loam.

"I can plow and harrow, transplant and set. I'm reliable, prompt and bright.

I never shirk, and I never forget."

She laughed out of pure delight.

"Oh, send for him, dear," she quickly said; "Do ask him at once to call."

"No use in the world," he shook his head. "He would not answer at all."

"Not answer? Why, he is the man we want. I'll write him myself—oh, yes."

"He will not answer—you see, he can't. He hasn't sent his address."

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Five Generations.

It is seldom, indeed, that a group of individuals representing five generations can be got together; and when such an event does occur it is worthy of note. Great grandfathers and mothers are rare, so that great grandfathers and mothers are classed as phenomenal. Yet when the matter is figured out it seems not so very strange after all that amongst the British and European yeomanry and the French-Canadian habitants who marry young, and live long, there should be frequent instances of old people having gathered around them their children and children's children to the fourth and fifth generations. The ages being (say) 84, 62, 42, 21, 1. When, therefore, very exceptional cases of longevity are met with, it would not be surprising to find the sixth generation, the ages being (say) 100, 80, 60, 40, 20, 1. But it is doubtful if such an instance is on record, as to make this possible it would be necessary for the eldest of the family in every generation to become a parent at 20. This is too close calculation to be carried out, seeing that it requires a whole century to do it.

We will not, therefore, figure on a sixth generation, for, as already stated, four generations are rare, and five phenomenal. The case now brought to our notice (shown in the group photo) is that of the McMillans

that there was never another man just like them since the world began, that, therefore, they had their own duties, their own rights, their own work to do, and way to do it; but men also who questioned the circumstances in which they found themselves, and asked what was the best thing which any man in just those circumstances might set himself to do? These are the men before whom there rises by and by a dream, which later gathers itself into a hope, and at last solidifies into an achievement. It is something which only they can do because of their distinctness and uniqueness. It is something which even they could not do in any other circumstances than just these in which they do it now.—Phillips Brooks.

A Lesson in Anatomy.

How many bones in the human face? Fourteen, when they're all in place.
How many bones in the human head? Eight, my child, as I've often said.
How many bones in the human ear? Four in each, and they help to hear.
How many bones in the human spine? Twenty-four, like a climbing vine.
How many bones in the human chest? Twenty-four ribs, and two of the rest.
How many bones the shoulder's band? Two in each—one before, one behind.



FIVE GENERATIONS.

of Alexandria, Ont. Mrs. H. B. McMillan, aged 99 years in June last, has beside her a daughter, Mrs. H. R. McMillan, aged 72; a granddaughter, Mrs. Dugald McMillan, aged 45; a great granddaughter, Mrs. Duncan McMillan, aged 22; and a great great granddaughter, aged 18 months. A peculiarity about this group is that they are all McMillans. The old mother in Israel is one of those sturdy Scotch pioneers of Canada who helped to transform the wilderness into the thrifty Ontario of to-day. She can to-day read her Bible without spectacles and recognize neighbors passing the house on the road, 150 yards off, while walks of a mile and a half, to visit friends are of frequent occurrence. Possessing all her faculties as she does, she may live many years yet. This venerable old lady is the grandmother of Duncan and Daniel McMillan, of Glendale, Manitoba.

The Secret of Success.

Who are the men who have succeeded in the best way? Who are the men who have done good work while they lived, and have left their lives like monuments for the inspiration of mankind? They are the men who have at once known themselves in reference to their circumstances, and known their circumstances in reference to themselves; true men, sure of their own individuality, sure of their own distinctness and difference from every other human life, sure

How many bones in the human arm? In each arm one; two in each forearm.
How many bones in the human wrist? Eight in each, if none are missed.
How many bones in the palm of the hand? Five in each, with many a band.
How many bones in the fingers ten? Twenty-eight, and by joints they bend.
How many bones in the human hip? One in each, like a dish they dip.
How many bones in the human thigh? One in each, and deep they lie.
How many bones in the human knees? One in each, the kneecap, please.
How many bones in the leg from the knee? Two in each, we can plainly see.
How many bones in the ankle strong? Seven in each, but none are long.
How many bones in the ball of the foot? Five in each, as the palms are put.
How many bones in the toes half a score? Twenty-eight, and there are no more.

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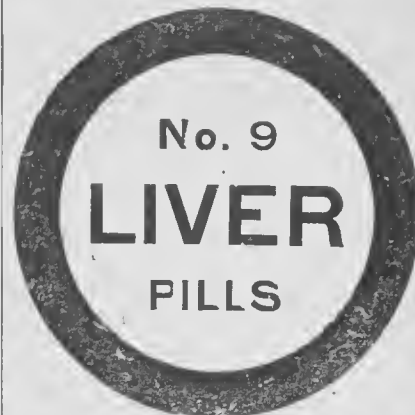
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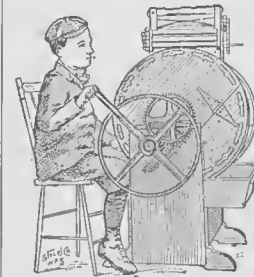
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Tomatoes in Twelve Ways.

The twelve ways here offered are largely new recipes, some from English cooks, some adapted from recipes of the famous Soyer.

TOMATOES STUFFED.

Cut a thin slice off the tops of eight large, firm tomatoes and with a spoon carefully lift out the pulp. Rub it through a sieve, discarding the seeds. To the juice add half a cup of stale bread crumbs, two tablespoonfuls of melted butter, a dust of salt, pepper and paprika and half a teaspoonful of minced parsley. Stuff the tomato shells with this, put a bit of butter on top of each and set in a hot oven for ten minutes.

TOMATO FARCIES.

Scoop out the tomato pulp, leaving the shells, and fill with a stuffing made from half a cup of sausage meat, four tablespoonfuls of stale bread crumbs, one teaspoon minced parsley, a shred of garlic, one teaspoon of tarragon vinegar and one teaspoon of finely minced onion. Set the tomatoes in a baking dish, cover with buttered bread crumbs and bake till chestnut brown. Just before sending to the table squeeze over them the juice of one lemon.

DEVELOPED TOMATOES.

For this dish cook six large, solid tomatoes. Wipe, peel and cut in slices half an inch thick. Dust with pepper, salt and flour and saute in brown butter. Lift each carefully with a skimmer when cooked and lay on a hot platter. Pour over them a sauce made as follows: Cream half a cup of butter, add four teaspoonfuls of powdered sugar, two teaspoonfuls of mustard, half a teaspoon of salt, a dust of cayenne, the yolks of two hard-boiled eggs rubbed to a paste, two eggs beaten slightly and a quarter of a cup of vinegar. While the tomatoes saute put the sauce to cook in a bowl set in a teakettle—the double boiler is too hot for it—and pour when thickened over the sauted tomatoes.

TOMATOES IN THE CHAFING DISH.

This dish may be made delicious in the blazer of a chafing dish or in a spider as desired. Cut large tomatoes in slices—do not peel them—dust them with salt, pepper, paprika and powdered sugar, then roll in sifted cracker crumbs. Put two tablespoonfuls of butter in the blazer and cook the tomatoes till browned. Serve on hot plates with fingers of buttered toast.

TOMATOES WITH SHRIMP FILLING.

Scoop the pulp from eight large tomatoes and turn each one upside down on a sieve that all the liquor may drain from them. Prepare a stuffing: brown two slices of onion in two tablespoonfuls of butter, lift out the onion when cooked and add the tomato pulp. Cook till quite thick, add one cup of stale bread crumbs, mix thoroughly, lift from the stove and stir into it a quarter of a cup of cream, one and a half cups of shrimps cut into inch pieces and a seasoning of salt and paprika. Fill the tomato shells with this stuffing, covered with buttered crumbs, and bake in a hot oven till brown. Serve on rounds of hot buttered toast.

SCALLOPED TOMATOES.

Scald and peel half a dozen tomatoes, set them in a buttered baking dish, sprinkle with pepper, salt and a dust of powdered sugar. Cover with buttered dry crumbs and bake till brown.

TOMATOES WITH SPAGHETTI STUFFING.

Scoop the inside from eight tomatoes. To one and a half cups of cooked spaghetti add the tomato pulp, one tablespoonful of butter, pepper, salt and a few drops of onion juice. Fill each tomato cover with buttered crumbs and bake till brown. Instead of preparing the spaghetti, a left-over of spaghetti or macaroni slightly chopped may be very savourily utilized for this dish.

BAKED TOMATOES, CREOLE STYLE.

Cut into two halves crosswise six fine large tomatoes, place them in a buttered baking pan and sprinkle over them two green peppers finely chopped, one teaspoon of chopped onion, two tablespoonfuls of butter in small morsels and a liberal seasoning of salt and paprika. Lift the tomato slices carefully on to rounds of buttered toast, then add to the liquor left in the baking pan two tablespoonfuls of butter and two tablespoonfuls of flour melted and browned, stir well with a wire whisk, add one cup of cream, let it boil up, then strain over the tomatoes and toast.

PEELED AND CURRIED TOMATOES.

Cut four large tomatoes into rather thick slices. Saute them in one and one-half tablespoonfuls of butter. When nearly cooked

sprinkle with one teaspoon of curry powder, one tablespoon of flour, one teaspoon of finely chopped onion, a dash of salt and pepper. At the last minute add one cup of cream, let it boil up and then strain over the tomatoes served on buttered rounds of toast.

BROILED TOMATOES.

For this dish choose tomatoes which are not dead ripe. Cut them unpeeled in rather thick slices. Dust with pepper, salt and powdered sugar, roll in hot melted butter, then in finely sifted bread crumbs and brown in a wire broiler over a clear fire. This dish has a delicious flavor if instead of rolling in butter the slices of tomato are dipped in rich oil mayonnaise.

TOMATO AND SCRAMBLED EGGS.

Saute six tomatoes which have been peeled and sliced. When they are nearly cooked beat three eggs slightly, add two tablespoonfuls of milk, pepper and salt. Pour over the tomato and lift it here and there lightly with the fork till it sets. Serve the egg on a hot platter with the slices of tomato on top.

TOMATO WITH FORCEMEAT LAYERS.

Peel fine ripe tomatoes and cut them into half-inch slices. Prepare a forcemeat mixture made from two cups of stale bread crumbs, one tablespoon of melted butter, one tablespoon of sugar, a liberal dust of paprika, one teaspoon of salt and one teaspoon of chopped onion. Butter a baking dish, put in the bottom a layer of tomato slices, then a layer of forcemeat. Continue till the dish is filled. Let the top layer be slices of tomato. Sprinkle them with salt, pepper and powdered sugar, then cover with buttered crumbs. Bake three-quarters of an hour. For the first twenty minutes keep them covered, then allow the top to brown.—Good Housekeeping.

Cauliflower Variety.

BUTTERED CAULIFLOWER.

Break a firm head of cauliflower into sprigs and cook in boiling water until about half done. Then take up, drain, and put into a saucepan with two tablespoonfuls of melted butter, the juice of one lemon, two tablespoonfuls of white sauce or of cream, a pinch of cayenne, a little salt, and a small cupful of hot water. Cook till tender, take up, strain the gravy, add to it one cupful of cream or white sauce, pour over the cauliflower, and serve at once.

SCALLOPED CAULIFLOWER.

Break the cauliflower into small sprigs and cook in boiling salted water until tender. Place the pieces in a buttered pudding dish and pour over them a sauce made as follows: Mix well together one-half pint of bread crumbs, one pint of sweet milk, one beaten egg, two teaspoonfuls of salt and a little pepper. Bake until slightly browned. One cupful of diced chicken or veal added to the sauce makes a great improvement. When this is used allow an extra cupful of milk and a little more seasoning.

SAVORY CAULIFLOWER.

Cook the cauliflower as in above recipes and set aside to cool. Prepare a pint of egg batter and add to it a teaspoonful of minced parsley and a tablespoonful of grated mild cheese. Dip each sprig of cauliflower in the batter and fry in butter. When done place on a hot dish and serve at once.

CAULIFLOWER SALAD.

Stand a firm white cauliflower in salt water for half an hour, then cook it in boiling water until tender but not quite done. Drain, cut into sprigs and arrange these neatly in a salad bowl lined with tender leaves. Mash the yolks of four hard-boiled eggs and cut the white into petals, arrange these like daisies over the cauliflower and pour over a plain French dressing. Serve very cold.

BOILED CAULIFLOWER.

Remove the outer leaves and cut off the stem close to the flowers. Wash thoroughly in cold water and soak in cold salted water (top downward) for one hour, allowing one tablespoonful of salt to one gallon of water. Then tie it in a piece of muslin or cheese-cloth to keep it whole and cook it in slightly salted boiling water until tender, keeping it closely covered. When done, lift it from the water, remove the cloth, stand it in a round dish with the flowers up, pour cream sauce over it and serve at once.

CAULIFLOWER AU GRATIN.

Boil the cauliflower. Melt a tablespoonful of butter in a saucepan and stir smoothly in one tablespoonful of flour, thin with half a pint of milk, stir until boiling, add four tablespoonfuls of grated cheese, a dash of cayenne and salt to taste. Pour this over the cauliflower and serve hot.

PICKLED CAULIFLOWER.

Choose fine, mature cauliflower. Cut away all the leaves and pull the flowers into small bunches. Soak in strong brine for two days, drain, put in jars with whole black peppers, allspice and stick cinnamon. Cover with boiling vinegar and seal while hot.

Cancer

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CAULIFLOWER CROQUETTES.

Cut small squares of bread a little over three-fourths of an inch thick. Hollow out the centres and fill with chopped cold cauliflower nicely seasoned, and moistened with a little cream sauce. Brush over the bread with soft butter and place in the oven until very slightly browned.

CAULIFLOWER CROQUETTES.

Chop two cupfuls of cooked cauliflower quite fine, add one-half cupful of bread crumbs and one cupful of cream sauce, made by cooking together one tablespoonful each of butter and flour and thinning with one cupful of milk; just before removing from the fire add one well-beaten egg. Season to taste. Mix all well together and set aside to cool. Then form into croquettes, egg and bread crumb, and fry in butter to a delicate brown.

CAULIFLOWER IN BEEF NESTS.

Cut slices of rare roast beef rather thin, spread them on one side with butter and seasoning and cover with a half-inch layer of dressing made by mixing together one cupful of chopped cooked cauliflower, one-half cupful of bread crumbs, one teaspoonful of minced parsley, one beaten egg, and seasoning to taste. Roll up, fasten with a neat skewer or tie, and fry to a delicate brown in smoking hot oil or fat, drain and serve at once.

CAULIFLOWER CREAM SOUP.

Cook one pint of finely chopped cauliflower in a double boiler with one quart of milk until perfectly tender. Then press through a coarse sieve and return to the fire, season to taste, add one tablespoonful of butter and one dessertspoonful of cornstarch stirred smoothly in a little cold milk. Cook and stir until perfectly smooth and serve at once with small squares of buttered brown bread.

CAULIFLOWER HASIL.

Allow one cupful of chopped cooked steak to two cupfuls of chopped cooked cauliflower. Moisten with cream sauce or gravy, season to taste, cover with bread crumbs and bits of butter, and bake for twenty minutes in a moderate oven.—Good Housekeeping.

A Few Facts

About the New Catarrh Cure.

The new Catarrh Cure is a new departure in so-called catarrh cures because it actually cures, and is not simply a temporary relief.

The new Catarrh Cure is not a salve, ointment, powder nor liquid, but a pleasant tasting tablet containing the best specifics for catarrh in a concentrated, convenient form.

The old style of catarrh salves and ointments are greasy, dirty and inconvenient at the best; the new preparation being in tablet form is always clean and convenient.

The new Catarrh Cure is superior to catarrh powders because it is a notorious fact that many catarrh powders contain cocaine.


The new catarrh cure is called Stuart's Catarrh Tablets, a wholesome combination of blood root, beechwood tar, guaiacol and other antiseptics, and cures by its action upon the blood and mucous membrane, the only rational treatment for catarrhal trouble.

You do not have to draw upon your imagination to discover whether you are getting benefit from Stuart's Catarrh Tablets; improvements and reliefs are apparent from the first tablet taken.

All druggists sell and recommend them. They cost but 5¢ cents for full-sized packages, and any catarrh sufferer who has wasted time and money on sprays, salves and powders, will appreciate to the full the merits of Stuart's Catarrh Tablets.

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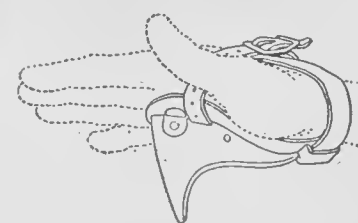
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